

IRIDIUM—continued.

A	rc Spectrum		Spark Spe	ectrum	Reduction to		
Wave-length		Intensity	Wave-length	Intensity	Intensity Vacuu		Oscillation Frequency
Kayser	Exner and Haschek	and Character	Exner and Haschek	and Character	λ+	$\frac{1}{\lambda}$	in Vacuo
	138 W (187)		2300·8 00·5	1 1	0.69	13.1	43450· 56·
	2300.11	1	00.5	-	"	"	63.1
	2000 11	TWIFE	2299.8	1	"	"	69.
		The state of	97.3	2	,,	,,	43516
	0005 10	1000	96.3	1	"	- "	35.
	2295·19	1	95·2 94·5	1 1	"	"	56.3
			93.7	1	"	"	69· 85·
	BANG AS		92.5	î	"	"	43607
			91.8	1	"	,,	21.
	10000 200		91.0	4	"	,,	36.
	SET E	I III A	89·5 88·3	2 2	,,	13.2	65.
			87.0	2 2	"	1	87· 43712·
			85.7	1	"	"	37.
			84.6	1	"	"	58.
		1000	81.7	2	,,	"	43814
	MA STOREY		81.2	2	,,	,,	23.
			80·6 78·5	2	,,	"	35.
		D. C	77.7	1	0.68	"	75· 91·
			77.3	i	,,	"	98.
			77.1	i	"	"	43902
		E 15 - 10	76.3	1	,,		18.
			75.6	1	,,	13.3	31.
			72·5 71·4	1n 2	"	"	91.
			68.9	2	"	"	61.
			68.5	2	"	"	69.
			68.1	1	,,	,,	76.
		The last	67.8	1	,,	,,	82.
	24 70		65.3	2	"	,,	44131
	64.73	1	64·7 63·0	ln ln	,,	13.4	42.1
	L. Marie Landing		62.4	ln	"	1 2 - 1	76· 87·
			62.2	i	"	"	91.
	THE SHAPE	1.6.8	59.3	2	"	"	44248
	59.00	1	W0.5	1 3 5 5 5	,,	,,	54.0
			58.8	1	,,	"	58.
	The Party of	BY HOW	58·4 57·5	2 2	"	"	83·
	The second		57.1	2	"	"	91.
			56.5	ī	"	"	44303
	-11	ding a second	56.0	1	"	,,	13.
	H SE W	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	55.5	1	"	"	23.
1	55.22	1	55.3	1	"	"	28.2
Will College	53.60	ln	53.3	1	"	"	60.0
	REAL CONTRACTOR		52.0	i	"	"	92.
	The second second						
V SVET	13		51.5	î	"	,,	44401
						13.5	44401· 17· 43·

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IRIDIUM-continued.

A	rc Spectrum	A CTALEGE	Spark Spe	ectrum	Reduction to Vacuum		
Wave-length		Intensity	Wave-length	Intensity	The state of the s		Oscillation Frequency
Kayser	Exner and Haschek	and Character	Exner and Haschek	and Character	λ+	$\frac{1}{\lambda}$	in Vacuo
			2247.7	1	0.68	13:5	44476
			46.7	2	,,	,,	96.
			45.5	2	,,	,,	44520
	PART TO SEE		43.8	1	,,	,,	54.
	2242.80	2	42.6	4	,,	,,	73.6
	2 10 30 4	UNITED BY	40.5	1	,,	,,	44610
		5000	38.7	1	,,	13.6	55.
	EL SIN KENE		38.3	2	,,	,,,	63.
		The state of the s	38.1	1	,,	,,	67.
			37.1	2	,,	,,	87.
			36.3		,,	99	44703
			34.3	1	,,	,,,	43.
		172	34.0	1	,,,	,,	49.
			33.2	1	,,	99	65.
			32.0	1	,,	99	89.
	1-11-11-11-11		24.2	1	0.67	13.7	44946
			20.6	ln	,,	99	45019
			19.3	1	,,	,,	46.
			18.9	1	,,	,,	54.
			12.4	1	,,	13.8	45186
			11.2	1	,,	,,	45211
		The state of	10.2	ln	,,	"	31.
			08.7	ln	,,	,,	62.
			05.0	2	,,	,,	45338
	STATE OF THE STATE OF		2197.5	1	,,	13.9	45492
			96.1	1	,,	,,,	45521
			92.2	1	,,	14.0	45602
	THE WAY TO	1 18 = 1	90.3	2	,,	,,,	42.
		1000	87.0	1	,,,	,,	45711.
			78.5	1	0.66	14.1	45889
		1 3 1 1 1 1	69.3	1	,,	14.2	46184
	S JV E A	1	52.6	1	,,	14.3	46441
	100 18 18 181	10 504	51.7	1	,,	,,	61.

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APPENDIX S

BY

W. MARSHALL WATTS

D.Sc.(LOND.), B.Sc.(VICT.)



LONDON
WILLIAM WESLEY AND SON
28 ESSEX STREET, STRAND

MANCHESTER
ABEL HEYWOOD & SON
1908

QC453 W3 Qp2

GENERAL



APPENDIX S.

STANDARD LINES.

Buisson and Fabry, 'C.R.,' exliii. p. 165 (1906); exliv. p. 1155 (1907). Perot and Fabry, 'C.R.,' exexiii. p. 153 (1901). Kayser, 'Ann. d. Physik' (4), iii. p. 195 (1900). Eversheim, 'Zeitschrift für wissenschaftliche Photographie,' v. 152 (1907). Wave-lengths in dry air at 15 °C. and 760 mm.

Buisson and Fabry	Perot and Fabry Solar Spectrum	Kayser Iron Arc	Previous Measurements (Solar Spectrum)
Iron Arc	Solar Spectrum	Hon Ale	Rowland
6494.994			6495.209
	6471.666 Ca		71.885
30.859	ALL TO THE REAL PROPERTY.		31.063
	08·027 Fe		08.231
3393.612			6393.818
35.343	6335.346		35.550
	22·706 Fe		22.912
18.029			18.242
6265.147	Charles To 198	Section 1	6265:347
30.732	6230.746		30.946
6191.569			6191.770
	6151.639		51.834
37.700	V		
6065.493	6065.506		6065.708
27.059			27.265
	16.650 Mn		16.856
03.039	ACCOUNTS TO	E STEEL LAND	03.245
	5987·081 Fe		5987.286
5952.739			
34.683	34.666		34.883
5892·882 Ni	TO SERVICE SER		5893.098
	5862·368 Fe		62.580
57·760 Ni			
05·211 Ni	AND THE REAL PROPERTY.		05.448
5763.013	5763.004		5763-215
60·843 Ni		S. S. S. S. S. C. C.	
	15.095	-	15:309
09.396			09.616
5658.835		Service Control	
15.658	SENTENNIN S		5615.879

Note.—The wave-lengths now given by Buisson and Fabry rest on the value 6438·4696, determined by Benoit, Fabry, and Perot for the red line of Cadmium, and those of Perot and Fabry on Michelson's value 5085·8240 for the Cadmium green line.

Buisson and Fabry Iron Arc	Perot and Fabry Solar Spectrum	Kayser Iron Arc	Previous Measurements (Solar Spectrum) Rowland
5586.770	5586.778		5586.991
69.632	0000 110		69.848
35.418			00 020
06.783	06.794		07.000
5497.521	5497.536		5497.731
55.616	010,000		55.826
34.530	34.544		34.742
02000	09·800 Cr		10.000
05.780			05.987
5371.498		The state of the s	5371.686
	5367·485 Fe		67.670
	45.820		45.991
24.196			24.373
02.316			
5266.568	MAN CONTRACTOR OF THE PARTY OF		5266.729
	5247.587		47.737
	47.063		47.259
32.958*	The state of the s		33.124
5192.362			
	5171.622 Fe		5171.783
67.492			67.686
27.364			27.530
2,001	23.739		23.889
10.415	20 100		10.570
10 110	5090·787 Fe		5090.959
5083.343	0000 101 10		0000 000
49.827			50.008
12.072			00 000
01.880	01.881		02.044
4966.104	01001		02 011
4000 104	4923·943 Fe		4924.109
19.006	1020 010 10		19.183
03.324			03.488
4878.226			00,100
59.756†	4859.758		4859-934
23·521 Mn	4000 100		23.697
4789·657	190 190 190 190		20 001
1100 001	4783.449		4783-601
54·046 Mn	1100 110		54.226
36·785	36.800		36.963
07.287	30 000		1
01 201	04.960		05.131
4678.855	04 500		4679.028
74.437	194 8 2 22		1010 020
14 491	4643.483		43.645
02.944	4049,409		10 010
4592.658	W		
4592.058			THE RESERVE AND ADDRESS OF THE PARTY.
	THE RESERVE	E STATE OF THE STATE OF	
31.155	Contract Con	4404-755	4494.735 (.756 in arc)
4494.572‡	The second second	4494.755	4494.199 (.190 in arc)
		89.929	E DEVELOPED REPORTS
		84.420	THE RESIDENCE OF THE PARTY OF T
		76.207	THE RESERVE AND THE PARTY OF TH
00.224		69.566	E TOP TO THE OWNER OF THE PARTY OF
66.554	The state of the s	66.737	The State of the S

^{*} Eversheim, 5232·9630. ‡ *Idem*, 4494·5812.

[†] Idem, 4859.7613.

Buisson and Fabry	Perot and Fabry	Kayser	Previous Measurements (Solar Spectrum)
Iron Arc	Solar Spectrum	Iron Arc	Rowland
		4461.838	
		54.572	
		47.907	4447.899 (.912 in arc)
		42.522	
4407.014		30.801	
4427.314	A SANGE TO SANGE	27.490	
	THE SERVICE OF	15·301 04·929	15·299 (·298 in arc)
	STORY OF THE STORY	4391.137	04·927 (·928 in arc) 4391·149
		83.724	83.721
4375-935*		76.104	76·103 (·108 in arc)
		69.954	69.948 (in arc)
		67.759	00 010 (010)
		58.689	
52.741	TERRES DE COMP	52.910	52.908
100		46.739	
		37.219	
15.089		25·941 15·255	25.932
19 009		09.542	
		4299.420	
		94.290	
		91.631	
		85.614	
4282-407†		82.567	
	d china to a	71.933	4271.920
		71.333	
		60.656	60.647
		50.948	50.949
		50·299 47·604	50-300
		45.423	
	AND SHALL SEE THE SHALL SHALL SEE THE SHALL SEE THE SHALL SH	38.980	
		36.118	
33.615		33.771	
		27.606	
		22.387	22.396
		19.523	
	FARM SHOWING	10.521	
		02.195	02.187
4191.441	THE REAL PROPERTY.	4199·256 91·611	4199-257
4191 441		87.221	
		81.918	
		75.799	
		71.069	* Superior Superior
		54.662	
47.677		44.000	
	Name and the last	44.033	
34.685		37.156	
18.552		18.709	
10 002	NEW SECTION OF THE PROPERTY OF	14.608	14:600 (:)
		07.646	14.600 (in sun)
		4098.346	
	Busice of the	96.135	

^{*} Eversheim, 4375.9435. † Idem, 4282.4125.

Buisson and Fabry	Perot and Fabry Solar Spectrum	Kayser Iron Arc	Previous Measurements (Solar Spectrum)
Iron Arc	Solar Spectrum	Iron Are	Rowland
		4084-166	THE REAL PROPERTY.
		79.999	
4076.641	The Block of		
		71.901	4071.903
		68·138 63·755	63.755
		62.605	62·602 (in sun)
		55.706	55.701 (,,)
		•45.978	45.975
		44.776	
		32·796 30·670	
21.872		22.029	
21012		17.303	
	THE RESIDENCE OF THE PARTY OF T	07.429	
		3998-211	
		96·148 86·330	
		84.112	
3977.745	Was a series of	77.892	3977·891 (in sun)
		69.411	
		66.219	
		56·823 56·610	
		48.927	
		45.269	
		41.032	41.034
35.818		35.966	
		28.073	28.060
		23·059 20·404	
		18.467	
		16.880	16.886
		13.784	
		09.980	
06.481		06·624 03·097	
		3899.853	
		95.801	
		93.538	
	1 State of the	87.193	0000 401
	HARRIE STATE	86·426 78·722	3886-421
		78.166	
	WANTED TENT	72.640	
3865.526	THE REPORT OF THE	65:670	THE RESERVE OF THE PARTY OF THE
		60.054	60.050
	19.57(2) 27 18	56·515 50·114	56·517 (in sun)
43.261		50.114	
45.201	Part Burnell	41.194	
		40.586	40.589
		34.370	STORY OF THE PARTY OF
		33.463	OH OH9
		27.967	27·973 26·024
	S I S I S I S I S I S I S I S I S I S I	26·028 24·591	20.024
		20.573	20.566

Buisson and	Perot and Fabry	Kayser	Previous Measurements
Fabry Iron Arc	Solar Spectrum	Iron Arc	(Solar Spectrum) Rowland
		9014 005	
		3815.987	3815.984
		13.202	
		06.847	Plant Burger
2004 212			
3805.346		01.822	05.487
		3799.694	3799-698
		98.656	98.662
	LOS TOTAL	95.149	95.150
		90.242	30 100
		88.031	88.032
		78.670	00 002
		76.606	
		70.452	San Barrier
	1 7 To 10 SO 10 1	67.339	67.344
		63.940	63.942
3753.615		58:381	58.379
0100 010		49.634	49.633
		48.409	48.409
		45.710	45.701
		43.510	43.502
		37.278	37.282
		35.016	35.075
		33-470	33.467
		32.541	32.542
		31.102	
24:379		27.769	27.763
24.919		24.527	22 201
		22·710 20·083	22.691
	Marile Tables	09.395	20.086
		07.199	09·397 07·186
		05.714	05.711
		02.180	05 711
		3695.202	3695.194
	Market B	87.609	87.607
	THE REPORT OF	83.205	83.202
		80.062	80.064
3677.628	Dynas Calabas		
		76.461	
		69.674	
	1	59.673	
		55.625	
		51.615	
		50.429	47 005
40.391		47·997 40·541	47.995
10 001		32.195	40.536
		31.617	31.619
		30.506	21.019
	THE PARTY OF THE P	22.158	22.147
		18.918	18.924
THE PROPERTY.		17.944	17.920
			~ 1 020
No.		17.474	
		17·474 12·242	12.217

Buisson and Fabry	Perot and Fabry Solar Spectrum	Kayser Iron Arc	(Solar S	Ieasurements Spectrum)	
Iron Arc	Solar Spectrum	Hon Aic	Rowland		
3606.681	Managara E. Day	3606.836	3606.831		
3000.081	- Mariana		05.635		
		05.619	09.039		
		3599.781			
		94.767			
		87.137	THE REAL PROPERTY.		
	Ballotte and a	85.478			
		81.348	3581.344		
The state of the s	TO AND THE PARTY OF THE PARTY O	70.257	70.225		
		65.535	65.528		
		58.672	58.670		
3556.879					
	FILE SE	53.898			
		45.793	THE RESERVE		
	1000 - 3 - 3 - 3 - 3	40.287	40.266		
	STATE OF THE PARTY	36.694			
	1179020	29.960	TO SEC. LETTER		
	100 M ST 100	26.822			
		26.196			
		21.415	21.404		
13.820		13.974	13.947		
		08.663			
		08.627			
		06.650	7-1		
		00.716	00.721		
	THE RELATIONS	3497.989	3497.991		
	The state of the s	90.721	90.721		
3485:344		85.496	30 121		
9499.944		83.159			
		76.850	76.831		
			75.594		
		75.600	19.994		
		71.497			
		71.413	05 001		
	Carlotte St.	66.006	65.991		
	THE WE'VE SELECT	60.067	THE RESERVE TO SERVE THE PARTY OF THE PARTY		
		58.454	THE RESERVE		
10		50.484	TO BOLL SOLL		
45.155	TENTAMON BEST	45.301	11.000		
		44.025	44.032		
		41.138	41.135		
	The section of the section of	40.762	40.759	IO LOW OFFI	
		27.263	27.282	$(3427 \cdot 279 \text{ in arc})$	
	THE RESERVE OF THE PARTY OF THE	24.430	2 6 1 5 1 1		
		18.649	TENTO VENE		
	THE RESERVE OF THE RE	13.275			
	No. of the last of	06.938	06.955		
	A THE STATE OF THE STATE OF	06.578	06.581		
3 99.337		3399.468	21511131125		
		97.117	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	WHILE THE PARTY	
	E PER DE GENERAL	94.721	ESHED IS		
	HERRY SAME	89.882	3389.887		
	THE REAL PROPERTY.	84.113			
	The second second	80.242	THE PARTY OF THE P		
	S EVANUTE E	78.814	COLUMN TO SERVICE		
70.789	7.9		BUYERLE		
		67.675	E4STARS.		
		66.993	THE RESERVE		
	THE PERIOD IN	66.917	-		

	STANDAL	RD LINES—ce	ontin	uea.
Buisson and Fabry Iron Arc	Perot and Fabry Solar Spectrum	Kayser Iron Arc		Previous Measurements (Solar Spectrum) Rowland
	The second second	3351.882		3351.877
		48.056		48.011
and the second		42.340		40 011
		42.034		
		37.793		
		28.992		
		25.589		
3323.739		19860,64		
		17.251		
		14.868		
	A THE RESERVE TO THE PARTY OF T	06.479		06.471
		06.106		06·117
		3298.263		
		92.721		
E LONG THE AT		86.884		
		84.720		
0071 000	SHEET STATE	80.386		
3271.003	THE RESERVE	71·129 65·746		
		57.724		
		53.043		
	The Court Park	48.332		
		46.617	1	
		44.308		
A CONTRACTOR OF THE PARTY OF TH	The state of the	39.564		
South State Care	In the same of the	31.091		
	ROSE CONTRACTOR	28.379	10	
25.790		25.905		3225.923
	PENY, FIRE	22.187		22.203
		16.057		14-150 (in and)
		14·158 12·112		14·152 (in arc)
		10.953		
		05.513		
		00.595		
		3199.638		
		93.423		
	and Description	92.921		
		91.778		
A STATE OF THE PARTY OF THE PAR	HEREST THE TANK	88.947		
		85·015 78·122		
3175-447		75.556		
31/0.44/		71.743		
		66.551		
		65.129		
		62.064		
	THE RESERVE	60.764		
		57.157		
	THE REAL PROPERTY.	51.460		
		44.096		
		42·565 40·503		
	No. 18 au	32.627	16	
25.661		25.770		
20 001		19.609		
		16.747	1	
	THE SECOND STATE OF	12.183		

Buisson and Fabry	Perot and Fabry Solar Spectrum	Kayser Iron Arc	Previous Measurements (Solar Spectrum)
Iron Arc	Solar Spectrum	Hon Are	Rowland
		3100.778	3100·779 (in arc)
3	T MIN SU	00.418	00.415
			00.415 ,,
		00.057	"
		3095.013	3095.003
		91.687	
		83.853	83.849 (in arc)
3075.725		75.830	75.849 ,,
		68.286	
		67.363	67·363 (in arc)
		64.042	
	E l'ethica de la	59.202	59·200 (in arc)
	Thursday of the same of the sa	57.562	57.557 ,,
		51.179	
		47.719	47.720 (in arc)
	914 81 31	41.860	11 120 (III ale)
		41.753	THE RESIDENCE OF THE PARTY OF T
	San Charles		. 27.400
	Energe Hand	37.505	37.492
2020.150		31.753	The same of the sa
3030.152		25.960	95.059 (in are)
	1 S . S . S . S . S . S		25.958 (in arc)
		24.153	24.154 ,,
		21.194	21.191 "
		20.764	20.759 ,,
		20.619	20.611 ,,
	EL PT SUESTAL TO	19.105	19.109
	THE PROPERTY OF	17.747	17.747 (in arc)
	Marian Review	16.305	16.296 ,,
	THE DULIES TO	09.690	09.696 ,,
	William Control	08.254	08.255 ,,
	The second second	07.409	07.400
		07.262	07.960
		01.068	01.070
		2999.630	0000.000
			OA MAR
	I A TEMPORE	94.554	94.547 ,,
2007 555		90.511	07 430 (*
2987.293		87.410	87.410 (in arc)
		83.690	83.689 ,,
	THE RESERVE	81.565	81.570 ,,
		76.253	Bed Selection of the Se
	TREES PARTS BE	73.366	73·358 (in arc)
		73.254	73.254 ,,
	MELLICE GENERAL	70.227	70.233 ",
		67.019	07.010
		65.379	05.901
		57.484	FF.40F
	TO SEE SEE SEE		54.050
C. C. Links	ZI WANTER TO THE	54.061	54.058 ,,
	THE STATE OF	48.557	47.002 (
	THE RESERVE	47.996	47.993 (in arc)
41.347		41.462	DF 000 11
	E E CHECK SE	37.030	37.020 (in arc)
	3 - 3 - 3 - 3 - 3 - 3	29.119	29.127 "
	The second second	26.699	COLUMN TO THE CO
		23.409	Marie Marie Control of the Control o
	100000000000000000000000000000000000000	18.144	STATE OF STREET
12.157	T. P. S.	12.273	12.275 (in arc)
12 101		07.630	
		01.496	

Buisson and Fabry	Perot and Fabry Solar Spectrum	Kayser Iron Arc	Previous Measurements (Solar Spectrum)
Iron Arc	Solar Spectrum		Rowland
		2894-617	
		90.000	
		87.920	
	Man Jensey and Market	80.867	The second second second
		77.414	
2874.176		74.284	
		69.418	
		63.973	
		59.007	
51.800		51.910	2851.904
	1	48.828	
		44.083	44.085 (in arc)
		43.742	43.744 ,,
		38·231 35·562	38.226 ,,
		32.543	32.545 (in arc)
		25.803	32 343 (m arc)
		25.660	25.667 (in arc)
		23.382	23.389 ,,
		17.612	
13.290		13.391	13·388 (in arc)
		07.088	
		04.622	
		2797.877	
		91.989	
		88.207	2788·201 (in arc)
0		81.936	81.945 ,,
2778.225		78.327	78.340 ,,
		72·205 68·621	72·206 ,, 68·630 ,,
		62.125	60.110
		61.883	61.076
		57.413	01.870 ",
		56.412	56.427 (in arc)
		55.834	55.837 ,,
		50.238	50.237 ,,
		47.080	
	DEDE LES	46.580	
		45.177	
		44.624	
		44·163 42·506	49.405
	U Stranger	42.349	42.485 "
39.550		39.639	
33 000		37.407	37.405 (in arc)
		35.566	0, 100 (III al 0)
		33.978	33.973 "
	18 18 18 18 18 18 18 18 18 18 18 18 18 1	30.832	The state of the s
	P40 (9 2 2 1 1 1 1)	28.914	
		25.024	
		23.671	23.668 (in arc)
		20.997	20.989 ,,
The same	Water State of the	19.121	19.119 ,,
14.410	HAY TELEVISION OF	18.530	
14.419		14·503 08·663	
	28 7	06.672	06.684 (:)
		2699.193	06.684 (in arc)

Buisson and Fabry	Perot and Fabry Solar Spectrum	Kayser Iron Arc	Previous Measurements (Solar Spectrum)
Iron Arc			Rowland
		2690.153	
		89.302	
		80.544	
9070.005			9070.149 (in and)
2679.065		79.148	2679·148 (in arc)
		73.315	
	1530 3718	69.581	
		66.897	
		56.232	
		51.800	The second second
	Sea tale	47·649 44·085	
		35.899	
		31.139	31·125 (in arc)
28.296			31-125 (m arc)
20.790	Section 1	28·383 25·754	
	Hearth Hart	23.627	
		20.499	
		18·108 17·706	
	THE REAL PROPERTY.	13.914	Navia Cara
		11.963	11.965 (in arc)
	THE STATE OF THE S	07.155	11.905 (III arc)
	THE STATE OF THE S	06.920	
		2599.663	
	S. S. S. Simlo	99.483	2599·494 (in arc)
		98.456	00.400
2588-016	Section 1	88.102	98.460 ,,
2000.010		85.964	A SECTION OF THE PROPERTY OF T
		84.623	84.629 (in arc)
	THE STATE OF THE S	82.408	84.029 (III ale)
	THE REAL PROPERTY.	78.012	
		75.845	
	Daning To cold	74.462	
		67.001	
62.541	The state of the s	62.619	TOTAL STREET
02 041	THE PARTY IN	56.963	
	S. E.I.V.	51.192	
		49.708	49.704 (in arc)
		46.072	10.000
		44.016	46.068 ,,
	10 50 130 13	42.192	SEE SECTION OF THE SE
		41.064	41.058 (in arc)
	THE REAL PROPERTY.	37.263	41 000 (11 010)
	S 1 2 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	35.699	35.648 ,,
		33.911	30.048 "
	O ROLLING CO.	29.928	LIS TO RECEIVE A
	SOURCE STATE	29.223	
28·516 Si		49.449	28·599 Si
28.010.01		27.525	27.530 ,,
	The state of the s	24.393	21.990 ,,
		23.754	22.948 (in arc)
	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	22.950	
	CIPOL	18.198	18.188 ,,
		17.754	
		11·857 10·927	10.934 (in arc)
	A SERVICE OF SERVICE	07.991	10.994 (III are)
	5 10000	07.991	CONTRACTOR OF THE PARTY OF THE

STANDARD LINES-continued.

Buisson and Fabry Iron Are	Perot and Fabry Solar Spectrum	Kayser Iron Arc	Previous Measurements (Solar Spectrum) Rowland
		2701.000	
		2501.228	2501·223 (in arc)
	7 9801	2496.625	
S-Es alson		93·331 91·249	2491·244 (in arc)
		90.737	00 =00
		89.844	00.000
		88.232	88.238 "
		87.155	,,
		84.280	84·283 (in arc)
		83.618	
	O Trastillation	83.361	83.359 ,,
		79.872	79.871 "
		74.906	FO OH 4 (1
	TO BUT THE REAL PROPERTY.	72.976	72.974 (in arc)
		72·436 68·974	The second secon
	SACAN MICHAEL STREET	65.244	
		62.740	62.743 (in arc)
	A RELIEF OF STREET	62.279	02.745 (m arc)
		57.686	57.680 (in arc)
		53.568	0, 000 (m m20)
		47.808	47.785 (in arc)
	THE STREET	42.658	
		40.201	
		39.834	A CONTRACTOR OF THE PARTY OF TH
Canal Control		38.274	BEST BETTER RATE
2435·159 Si			The second second
	Links But and	31.126	
10.010		24.231	THE RESERVE THE PARTY OF THE PA
13.310		13.393	
		11·152 10·601	10.604 (in arc)
		06.742	00 749
		04.969	04.971 ,,
	Mark Strain	04.519	01011 "
		2399.322	2399·328 (in arc)
		95.709	95.715 "
		90.058	
	A STATE OF THE STATE OF	88.711	88.710 (in arc)
	B & 100 P T	84.473	
		83.324	22 722 (1
		82.114	82·122 (in arc)
		80.840	
	The state of the s	79·355 75·273	
2373.737		73.813	73·771 (in arc)
2010.101		68.670	15 / / I (III allo)
		64.904	64.897
		59.187	02001
	TOTAL LICENSES	54.969	
		48.380	48·385 (in arc)
		48.196	
		43.567	43.571 (in arc)
	THE REAL PROPERTY.	32.869	
		31.384	
		27.468	

S

IRIDIUM.

12

Exner and Haschek, 'Sitz. kais. Akad. Wissensch. Wien,' civ. 953, 1895; cv. 542. 1896.

Kayser, 'Abhandl. königl. Wissensch. Berlin,' 1897. Exner and Haschek, 'Wellenlängen-Tabellen der Bogenspektren der Elemente,' Leipzig und Wien, 1904.

Lohse, 'Astrophys. Obs. Potsdam,' xii. p. 163 (1902).

Adeney, 'Photographs of Ultra-violet Spark-spectra,' 'Trans. Roy. Dublin Soc.' (2), vii. 331.

Arc Spectrum		Spark Spe	ectrum	Reduct		Oscillation Frequency
Wave-length	Intensity	Wave-length	Intensity	Vacu	um	
Kayser Exner and Haschek	and Character	Exner and Haschek	and Character	λ+	$\frac{1}{\lambda}$	in Vacuo
5894·324 5625·772 20·266 5469·648 54·724 49·716 5364·507 57·081 40·932 5239·091 5178·128 5050·001 46·227 09·323 02·874 4999·898 70·629 39·311 38·225 4845·539 40·934 09·636 07·302 4795·827 78·330 58·107 56·613 32·014 29·005 09·034 02·751	2 3 1 1 2 4 2 0 0 1 1 1 0 0 0 0 1 2 0 0 1 1 0 0 2 0 0 1 0 0 0 0	4696·0 94·0 92·7 83·8 83·0 81·5 78·6 74·2 73·4 72·0 71·4 69·7		1·61 1·53 1·49 " 1·47 1·46 " 1·43 1·42 1·38 " 1·37 " 1·36 1·35 " 1·30 " " 1·29 " " " " " " " " " " " " " " " " " "	4·6 4·8 5·0 " 5·1 " 5·2 5·3 5·4 " 5·6 " " 5·8 " " " " " " " " " " " " " " " " " " "	16960·9 17770·5 88·0 18277·7 18324·4 44·6 18656·0 61·8 18718·2 19082·1 19306·7 19796·6 19811·4 19957·3 83·0 94·9 20112·7 20240·1 44·6 20631·8 51·5 20785·9 96·0 20845·8 20922·0 21011·0 17·6 21126·8 40·3 21230·0 58·2 21289· 98· 21304· 44· 48· 55· 68· 89· 92· 98· 21401· 09·
4669·130	2	69.4	ln	"	"	10.

IRIDIUM-continued.

A	rc Spectrum		Spark Spe	etrum		tion to	
Wave-	length	Intensity	Wave-length	Intensity		uum	Oscillatio Frequenc
Kayser	Exner and Haschek	and Character	Exner and Haschek	and Character	λ+	$\frac{1}{\lambda}$	Frequence in Vacue
HITETO I			4665.0	ln	1.28	5.9	21430
4070.000			56.5	1	,,,	>>	69.
4656.329		4	55.9	ln	"	"	70.2
			55.4	ln	"	"	72· 74·
			54.9	ln ln	1.27	"	77.
			54.4	ln	,,	"	79.
		153.3	50.7	1	,,	,,	96.
40.231		2	40.3	ln	,,	,,	21544.8
		2	27.5	ln	"	6.0	21604
16.549	4616.55	4	16.6	2	1.26	"	21655.2
14.342	1 1 1 1 1 1 1 1	0	04.7	1	"	"	65.6
	0-300		4586.5	ln	"	"	21711.
			85.7	ln	"	"	21801
			84.5	ln	"	,,	07.
			82.0	1	,,	,,	19.
		272	79.5	ln	1.25	,,	30.
	BE BE		70.5	ln	,,	"	73.
4570.183	17700 00	2	70.1	1	,,	"	75.0
68.246	4568.30	3n	68.2	2	"	6.1	84.1
			65·0 64·2	ln 1	"		21900-
			61.0	1	. "	"	19.
			58.7	î	"	"	30.
			58.0	1	,,	"	33.
	54.72	1	54.7	1	"	,,	49.1
		300	54.2	1	,,	,,,	52.
19	I BI HE	E TATE	52.5	ln	"	"	60.
50.941	10.01	2 3n	50.9	1 2	"	"	67.4
48.645	48·64 45·84	3n 3	48·7 45·8	2	"	"	78·5 92·0
45.837	49.94	3	43.0	1	1.24	**	22006
			42.4	i	,,	"	09.
			39.3	1	"	"	24.
38.819		1	38.7	1	,,	,,	26.1
-01	The state of the s		34.5	lb	"	,,,	47.
33.003	- Copy	2	33.0	1	"	,,	54.3
	The same of		15·3 14·4	ln ln	"	"	22141
	The 18 of 18	N COLOR	12.0	lin 1	"	"	45· 57·
	1		11.0	1b	"	"	62.
		1	09.0	ln	"	"	72.
OGC - F		D Silver	05.7	ln	1.23	,,	88.
	6-10116		05.1	ln	,,	,,	91.
			01.7	ln	"	,,	22208
4400.000	Rose Sept	-	01.0	ln	"	",	11.
4496.200	4405.50	1 2	4496·1 95·4	1 2	,,	6.2	34.8
95·525 92·333	4495.52	1	95.4	1	"	"	38·2 53·9
91.523	2 14 32	2	91.4	2	. "	"	58.0
01 020		1	84.0	În	"	"	95.
			82.1	1	"	"	22305
78.649	78.65	3	78.4	4	,,	"	22.0
		- 1	70.5	ln	,,,	,,,	63.

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IRIDIUM—continued.

Aı	c Spectrum		Spark Spe	etrum	Reduct		
Wave-	length	Intensity	Wave-length	Intensity	Vacu	ium	Oscillation Frequency
Kayser	Exner and Haschek	and Character	Exner and Haschek	and Character	λ+	1 \(\lambda\)	in Vacuo
100000	118 11834		4467.4	1b	1.22	6.2	22378
	77		66.8	1	,,	,,	81.
	48		60.0	1	,,	,,	22415
			58.2	1	,,	"	24.
4452.987	THE PARTY OF THE P	1	52.9	1	"	,,	50.6
	THE PARTY		52.7	ln	"	"	52.
	Share William		51.4	1	,,	"	59· 61·
	4450-41	ln .	90.9	1	"	"	63.6
50.346	4400.41		50.2	1	"	"	63.9
49.540		2 0	302	1	"	"	68.0
49 040			44.0	In	"	"	96.
	1 S SEAT	-	43.1	1	,,	"	22501
26.459	26.45	5	26.5	4	1.21	6.3	85.1
25.936	20 20	0					87.8
22.121		1	22.0	1	"	"	22607.3
7. 17. 1	Vice Color		21.3"	În	"	"	12.
11.344		2	11.2	1	"	,,	62.5
		- EH 201	10.5	1	"	,,	67.
06.926		0	06.9	1	"	"	85.3
03.952	03.98	3 .	04.0	2	,,	,,	22700.5
	The same of	F DIV	01.4	1	,,	,,	14.
4399.645	4399.68	4	4399.7	6	,,	,,	22.7
92.758	92.80	2	92.8	1	1.20	,,	58.3
			90.4	l ln	,,	,,	71.
			88.5	1	,,	,,	81.
	The second second		88.1	1	,,	"	83.
	to the line		81.2	ln ln	,,	"	22819.9
80.930	-	1	80.4	1	,,	,,	23.
			80.0	1	,,	,,	25.
77.175		3	77.2	1	,,	"	39.6
76.575	1000	0	76.6	1	,,	,,	42.6
			74.9	1	"	"	51.
	CONTRACT OF		73.8	ln	"	,,	57· 61·
	AND DESCRIPTION OF		73.0	ln 1	"	"	65.
		1	72·3 72·0	ln	"	,,	67.
		- F	69.2	ln	"	• • • •	81.
62-289		1	09 2	111	"	6.4	22917:3
02 200	The state of		61.3	1	"	,,	23.
			60.9	î	-10		25.
	CENTRAL CO	1 181 1	60.2	î	, ,,	"	29.
	111	F Story	59.6	î	"	,,	32.
		10 30 77	58.4"	În	,,	"	38.
	12.310008	113.8	55.8	ln	1.19	"	52.
	W 14 2 10 1	44	54.3	In	,,	"	59.
	Series Access	1 20	53.5	1	,,	,,	64.
52.720	THE RESERVE	2	52.7	1	"	,,	67.7
51.462	Charles	1	STATE OF THE PARTY		"	,,	74.4
	HU THE STREET	ERE	48.1	ln	,,	,,,	92.
	15 - 1 - 1 - 1 - 1	S. C. S. C.	43:7	1b	,,	"	23016
	1		42.2	ln	,,	,,,	23.
The state of	6 4 1		39.6	lb	,,	,,,	37.
32.490	d and	0		The state of	>>	,,	75.0
30.060	100	0	30.0	1	,,,	>>	88.0

IRIDIUM-continued.

Aı	rc Spectrum	and the same	Spark Spe	ctrum	Reduct	tion to	
Wave-l	length	Intensity	Wave-length	Intensity	Vacı		Oscillation Frequency
Kayser	Exner and Haschek	and Character	Exner and Haschek	and Character	λ+	$\frac{1}{\lambda}$	Frequency in Vacuo
			4328-8	1b	1.19	6.4	23095
4316-456		1	24·7 16·6	1	1.18	,.	23117-
4510 450			14.0	ln	Dec. of the last	,,	74.
		No. of the last	13.2	i	"	"	78.
11.669	4311.68	4	11.7	6	99	"	86.4
Control of the second		138 A-1	11.5	2	,,	,,	87.
10.750	10.76	3	00.0		,,,	,,,	91.4
	06.10	1	08·3 06·2	1	"	6.5	23205
05.359	00.10	0	05.4	1 1	"	,,	16·4 20·4
01.776	01.79	3	01.8	4	"	"	39.7
00.802	01.0	1	00.9	i	,,,	"	45.0
			4297.7	1	"	"	62.
			95.8	1	,,	,,	72.
4286.776	4286.79	1	86.7	1	19	,,	23321.0
		1	86.0	ln	,,	,,	25.
			86.2"	ln	"	,,	24.
			79·0 76·7	1 1b	1.17	99	63.
	A STATE OF THE STATE OF	1970	74.8	1	"	"	86.
69-101		0	69.0	i	"	"	23417-6
68-251	68-25	5	68.3	6	"	"	22.3
66.532	The sight	0	66.5	ln	,,	,,	31.7
65.450	65.47	ln			,,	99	37.6
22.044			65.3	1	,,,	99	39.
62.051		0	62.0	1	99	99	56.4
61.408	THE REAL PROPERTY.	2	61.3	1 1	"	,,,	59.9
59.280	59.26	3	59.2	2	"	"	67.
57.528	00 20	2	57.5	1	"	99	81.3
		POPULE S	49.0	ln	"	6.6	23528
		P. S. P.	47.5	1	"	"	37.
	THE RESERVE		47.2	1	1	"	38.
43.944	25	0	THE PARTY OF THE P		1.16	,,	56.4
41.198	STORY OF STREET	0			"	"	71.6
40·644 30·486		0	THE REAL PROPERTY.		"	"	74·7 23631·3
30.490		U	27.6	1	"	"	23631.3
	1		26.9	i	"	"	51.
The state of the s			25.5	i	"	,,	59.
23.327	THE RESERVE	0			,,	"	71.4
But a series	100	100	22.2	ln	,,	,,	78.
	01.57		21.5	1	"	,,	82.
20.950	21.25	1 2	20.8		,,	"	83.1
20.950		2	18.9	1 1	"	"	84·7 96·
18-428	B. San E. Sa	1	18.3	1	"	"	98.9
18.243	CERT PROPERTY	ō	100	The second	"	,.	99.9
17.908		2	17.8	1	"	"	23701.8
			15.2	ln	,,	,,	17.
	ENE ST	1 1 1	14.6	1	,,	,,	20.
1	The state of the s		13.4	1	,,	,	27.
12:383		2	12.6	1	,,	,,,	32.
12.983		4		1	99	99	32.9

S

16
IRIDIUM—continued.

A	rc Spectrum		Spark Spe	ectrum		etion to	
Wave	length	Intensity	Wave-length	Intensity		uum	Oscillation
Kayser	Exner and Haschek	and Character	Exner and Haschek	and Character	λ+	$\frac{1}{\lambda}$	Frequency in Vacuo
4212-197		0	4212-1	1	1.16	6.6	23734.0
	Kara a salah	1 2 3	11.2	1 1b	"	,,	40· 42·
	Line to the second		10·7 09·7	10	"	"	48.
		33-34	06.7	1b	"	"	65.
			.02.5	lb Fe?	1.15	,,	89.
00.031	4200.07	2	00.1	1	,,	6.7	23802.7
			4197.8	1	,,	,,	15· 27·
			95·8 93·0	1b	"	"	43.
			83.4	2	"	"	97.
4182-626	4182.62	ln	82.7	2	"	"	23901.7
			81.8	ln	,,	,,,	06.
72.736	72.81	2	72.8	2	,,	"	57.2
22 221	66.22	3	66·9 66·3	1 2	1.14	"	92· 95·9
66.224	00.22	3	65.3	1	"	"	24001
		33.11	63.8	i	"	"	10.
			63.5	1	"	,,	12.
			62.3	ln	,,	,,	18.
			61.7	ln	"	,,	22.
			61·1 58·2	ln l	"	"	25· 42·
	55.90	ln	55.8	2	"	"	55.5
	99-90	111	51.4	ī	"	"	82.
			39.3	1	"	6.8	24152
			38.3	1	,,	"	58.
			37.8	4	,,	,,	61.
			36·5 29·6	1b	1.13	,,	68· 24209·
			29.5	1	- 7/7	,,	11.
		- 9.4.1	28.5	1	"	"	15.
			28.0	i	"	,,	18.
		3 700	27.6	1	,,	,,	20.
1 1 2 3			26.6	1	,,	,,	26.
			26.2	1	"	"	29· 46·
		9521	23·2 17·5	ln l	"	"	80.
			16.7	1	"	"	84.
	10 10 10 10 10	21 49	16.4	i	"	"	86.
15.957	15.95	3	15.8	4	"	"	88.9
THE PARTY OF THE			13.8	1	,,	,,	24302
			10.3	ln	,,	,,	22· 34·
			08·4 08·3	l' ln	,,	,,	34.
		0 700	07.8	1111	"	"	37.
	04.35	1		THE REAL PROPERTY.	"	",	57.6
Silver	0100		00.3	ln	,,	,,	82.
4092.767	4092.79	2	4092.6	4	1.12	6.9	24426.4
		1000	91.6	In	,,	,,	33· 41·
		4 /4	90.3	lb	,,	"	41.
			89·6 86·0	1	"	"	67.
82.542	20 TO 18	1	82.6	1	"	"	87.6
04 044			82.3	i	"	",	89.

В

IRIDIUM-continued.

A	re Spectrum		Spark Spe	ectrum	Redu	ction to	
Wave-	length	Intensity	Wave-length	Intensity	Va	cuum	Oscillation Frequency
Kayser	Exner and Haschek	and Character	Exner and Haschek	and Character	100	$\frac{1}{\lambda}$	in Vacuo
4081·564 80·737	4080.75	0 2	4081.5	1	1.12	6.9	24493.5
00 101	4000.10	4	80·6 78·2	1	"	"	98.5
75.774	75.76	2	75.7	1	"	"	24514
72.532		2	72.4	2	"	"	28·4 47·8
70.822	70.88	2	70.7	2	, ,,	"	57.9
70.067	70.10	3	70.0	6	,,	,,	62.6
		100000	68.5	1	,,	,,	72.
		39.00	68·2 66·8	1 1b	"	"	74.
			65.0	10	,,	"	82.
			64.4	i	"	"	93.
			62.5	î	"	"	97· 24608·
			62.1	1	"	"	11.
59.377	59.43	ln	59.3	2	,,	"	27.3
			59.2	1	19	,,	28.
56-620	56.65	ln	56·9 56·5	1 2	"	"	42.
55.833	30 03	0	55.7	ln	"	,,	44.1
			55.4	ln	"	,,	48.9
			54.1	ln	1.11	"	52· 59·
			53.8	ln	,,	"	61.
			53.2	ln	,,	"	65.
21.500			51.9	1	,,	,,	73.
51·538 51·071		0 2	51.5	ln	"	99	75.1
01071	50.81	ln	51.0	1	,,	7.0	77.8
48.782	00 81	0			"	"	79.4
			47.6	1	"	"	91·8 99·
	AT COMME	-29.15	47.1	i	"	22	24702
-			46.6	1	,,	"	05.
			45.2	1	,,	,,	14.
			44.0	ln	"	. "	21.
			43·2 41·4	1n 2	"	,,	26.
40.578		1	41.4	-	"	"	37.
40.224	40.24	3	40.3	2	"	"	41·9 44·1
33.923	33.91	3	33.8	4	. ,,	"	82.8
			32.2	1	,,	,,	93.
		1 3 34 3	31.6	1	,,	,,	97.
			31.0	1 1	"	,,	24801
			29.4	ln	,,	"	04.
			25.5	1	"	"	11.
	NEC 3	5 F (65)	22.1	î	"	"	35· 56·
20.70	-	1143-13	21.6	1	"	"	59.
20.194	20.20	4		900	"	,,	67.4
The state of			20.0	6	"	,,	69.
			16·6 15·7	1 1	1.10	"	90.
	NEW TEN	1 1 1 1 1 1 1	15.3	1	-	"	95.
Ra Pictor	21186		13.8	1	,,	"	98· 24907·
845			11.6	1	"	"	21.
	The Table 1	TO THE	11.3	1	"	"	23.
Die service	DE M	100000	09.0	1	"	,,	37.

IRIDIUM—continued.

Aı	c Spectrum		Spark Spe	etrum		tion to	
Wave-l	ength	Intensity	Wave-length	Intensity	Vacuum		Oscillation Frequency
Kayser	Exner and Haschek	and Character	Exner and Haschek	and Character	λ+	1 _ \(\lambda \)	in Vacuo
	AND OF F	The seal	4008.5	1	1.10	7.0	24940
			07.9	1	,,	"	44.
		1000	07.5	1	,,	,,	46.
			06.7	1	,,	,,	51.
			06.3	1	,,	,,	54.
4005.717	Te 3 1 10 10	1	•05.6	1	,,	,,	57.3
05.164	4005.19	ln ln	05.0	1	,,	,,	60.7
00 101		13	02.0	1	"	7.1	81.
			01.8	ln	,,,	,,	82.
			00.6	lb	,,	,,	89.
		Statute .	3999.0	ln	,,	,,,	99.
3996-602		0	96.6	1	,,,	,,,	25014.2
0000 002			95.9	1	,,,	,,	19.
92.277	3992.30	5	92.2	6	,,,	,,,	41.2
02211	000200	1 21-12	90.5	1	,,,	,,	53.

IRIDIUM-continued.

Arc	Spectrum		-	Spark Sp	ectrum		Reduc	tion to	
Wave-1	ength	Inten-	length Inten- length		Wave- length Inten-		Vacuum		Oscillation Frequency in Vacuo
Kayser	Exner and Haschek	sity and Cha- racter	Exner and Haschek	sity and Cha- racter	Lohse	sity and Cha- racter	λ+	$\frac{1}{\lambda}$	
3989·575 87·963 85·003 78·240 76·466	3976-49	2 2 2 0 5	3989·2 88·0 87·5 86·5 85·0 84·1 83·7 81·2 80·0 79·6 79·3 78·9 78·6 78·3 77·0 76·5 75·8 75·8 70·3	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	3969·35 66·52	3	1.10	7.1	25058·2 61· 68·4 71· 78· 87·0 93· 95· 25111· 10· 21· 23· 26· 27· 29·6 45· 47 61· 80· 85·9 97· 25203·9 06· 14·

IRIDIUM-continued.

Arc	Spectrum			Spark S	pectrum		1 : 11:		Mar In a
		1			1	1		tion to	
Wave-	length	Inten-	Wave- length	Inten-	Wave- length	Inten-	Vac	uum	Oscillation
	1	sity		sity		sity		1	Frequenc in Vacuo
	Exner	Cha-	Exner	Cha-		Cha-		1	III VIIICUO
Kayser	and Haschek	racter	and Haschek	racter	Lohse	racter	λ+	$\frac{1}{\lambda}$	
			3964.5	1	SWI SE		1.09	7.1	25217
	Res 1 3	I STATE OF			3963.78	0.4	,,	,,	21.3
3962-926	Note: See	2	63.0	1	63.00	0.1	,,	,,	26.5
					61.66	0.1	,,,	,,	34.9
			20.0		61.24	0.1	,,	,,	37.5
		7-15	60.6	1	60.63	0·1n	,,	"	41.4
			56.8	1	59.03	0.4	,,,	,,	51.6
56.262		0	90.8	1			21	7.2	66.
00 404		U	22 1 1 1 2 2	Dec 1	56.09	1.5b	25	11	69·2 70·3
HADRY		1	PULL		54.60	0.8p	*,	"	79.8
MESSIE	Total La	0	52.7	1	52.85	0.3n	12	,,	91.0
52.099	3952-15	1	52.0	4	52.12	1.0	"	"	95.6
		100	52.1	1	State .		"	,,	000
50.259		0			50.34	0.3n	,,	,,	25307.4
48.459	48.47	ln			49.42	0.1	,,	,,	13.0
		F 46.5			48.45	0.3	,,	,,	19.2
46.420	46.40	4	46.4	4	46.44	1.1	,,	,,	32.2
			45.7	1	45.74	0.6	,,	,,	37.6
44.534	44.52	ln	44.5	1	45.22	0·2n 0·2	99	"	39.9
44.534	44.52	ln	44.5	i	44·50 44·50	0.2	,,,	"	44·4 44·4
44 994	1102	111	43.4	i	44 00	02	**	"	52.
	100		10 1	1	42.83	0.1	"	"	55.3
	0.96		100	200	42.15	0.1	"	"	59.7
41.242		0	41.2	1			,,	,,	66.
TITLE I	THE LO		38.5	ln	38.70	0.2	,,	,,	81.9
	S HE LE		37.8	ln			,,	>>	88.
	AND AND		36.6	ln			1.08	,,	95.
35.005	34.99	3	35.0	4	35.00	1.2	99 .	99	25405.8
34.063		2u	34.0	2			"	"	11.8
31.903		0	32.3	1	31.93	0.6	"	"	23· 25·7
31.903		U	320	1	31.34	0.1	"	. "	29.4
ONE			29.0	1	91 94	01	"	"	45.
		1	28.6	î	28.55	0.1	"	"	47.5
	34.18		357 11 24		27.28	0.1	"	,,	55.7
	26.05	1n	26.1	1	26.07	0.9	,,	"	63.6
		6.74	25.5	1			,,	,,	67.
					25.35	0.1	,,	,,	68.2
24.573	24.55	ln	24.6	1	24.66	0.1	99	"	73.1
20.004	09.09		24.1	1	09.69	0.9	"	"	76.
23.634	23.63-	1	23:7	1	23.63	0.3	"	"	79·4 82·8
			21.1	1	21.02	0.1	"	"	96.4
100		1999			19.25	1b	"	"	25507.9
311	7421		18.3	1			"	"	14.
	7 E. C.		16.8	î	Tests .		,,	"	24.
15.538	15.53	3	15.6	6	15.53	1.8	,,	,,	32.1
15.055	15.06	1	15.1	1	15.08	0.2	,,	,,	35.1
3	YES IN		14.5	1	14.46	0.1	,,	,,	39.1
FEBRURE:		1	14.0	1		1	,,	,,	42.
	1.42		13.4	1		00 000 00	29	99	46.

IRIDIUM-continued.

Arc	Spectrum	1		Spark S	pectrum		Reduc	tion to	
Wave-	length	Inten-	Wave- length	Intensity	Wave- length	Inten- sity		uum	Oscillatio Frequenc
Kayser	Exner and Haschek	and Cha- racter	Exner and Haschek	and Cha- racter	Lohse	and Cha- racter	λ+	1 _ \lambda	in Vacue
			3912-6	ln	3912-23	0.6p	1.08	7.2	25553.7
			11.7	1	RELEVE		"	99	57.
		198	11.2	1	E 1988	100	"	"	60.
		-	10·6 09·7	1.		1 3 3 3	99	"	64.
3909-219		0	09.7	1	09.25	0.5	"	"	70.
9909.219	1 3 3 3 3	. 0	07.6	ln	07.85	0.3b	"	7.3	73·2 82·2
	HILL ALL		06.9	ln	06.50	0.5	"		89.
		Z 3 5 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7	06.0	1	00 00	02	"	"	94.
		The same	000	1	05.64	0.2	"	"	96.
			04.3	In	04.48	0·1n	"	"	25604
02.807	3902.78	2	CO THE	18 19	02.97	0.2	"	22	15.
02.632	02.65	4	02.7	8	02.68	2.0	"	,,	16:
			01.5	ln	01.82	0.1	,,,	,,	21.8
		C. LEY		W SE	01.40	0.1	,,,	,,,	24.
			01.0	1	00.95	0.2	,,	"	27.
			00.0	1n		1	99	"	34.
		100	AT STAN	R. H. E.	3899.37	0.3	,,	"	37.
	200				99.06	0·1n	,,	99	40.
		10-10	3898.5	ln	98.57	0·ln	,,	99	43.
	1 2 2 30	3. 11.		. 18 11	97.99	0·1n	99	"	46.
					97.40	0·ln 0·ln	1.07	99	50.5
	19/10/2		95.6	6	96·61 95·73	3		"	61.8
		- 450b	95.0	0	95.07	0.3n	"	"	66.
			94.0	1n	3001	USI	"	"	68.
	10.40	To The	94.0	In	94.00	0·1n	"	"	73:
			010		93.49	0·In	"	"	76.
		No. 11	93.0	ln	00 10		,,	99	80.
			92.2	ln	92.32	0.4	"	"	84:
Contract to					92.14	0.4	,,	"	85.4
	64.33				91.56	0.1	,,	,,	89:
			90.3	1	90.39	0·In	,,	,,	97.
889.715		0	89.6	1	89.72	0.2	,,	,,	25701
			89.1	1	The same	1-33 H	99	99	06.
			87.5	1	87.88	0·1n	,,,	,,,	13.
			86.0	1			"	,,	26.
			85.5	1	85.58	0.1	,,	,,	28.9
			84.7	1	84.86	0·1n	"	"	33.0
	1000		84·3 83·3	ln ln	84.29	0·1n	,,,	,,	37.4
	1974	1 A 100 1 2	82.5	In In	. 82.44	0.6b	"	"	49.
	1000	4-14-2	81.0	ln	. 02.44	0.00	"	"	59.
		Tillo?	310	111	80.89	0·1n	"	"	60.0
	28 3 5		79.6	1	00 00	O III	"		69.
		TANK.	.00	10385	79.19	0·1n	"	"	71.8
			78.0	1			"	"	79-
				E CO	77.46	0.1n	"	"	82.8
		4	77.1	1	TO DESCRIPTION	283	,,	"	85.
AND SHEET			The state of	S PIE	76.93	0.4	"	,,	86.3
BLUS		B E E	75.5	ln	75.93	0·1b	"	,,	93.0
	1250	8 2 2 3	75.0	1	1500000		,,	,,	99.
W797 1		100	73.7	4	73.74	0.5b	,,	,,	25807.5

IRIDIUM—continued.

	ion to	Reduct		pectrum	Spark S			Spectrum	Arc
Oscillatio		Vacu	Turkou	Wave-	Tuton	Wave-	Tutou	length	Wave-
Frequence			Inten-	length	Inten-	length	Inten-	origin.	111010
in Vacuo			sity		sity		sity	1	
m vacuo			and		and	Exner	and	Exner	
	1_	21	Cha-	Lohse	Cha-	and	Cha-	and	Kayser
	λ	λ+	racter	Lionso	racter	Haschek	racter	Haschek	ituy eei
050101	F-0	1.07	0.5	9079.91		9070.0	90.0	9079.90	
25810	7.3	1.07	0.5	3873.31	4	3873.3	2 Co ?	3873.28	
19:	,,	39	0·1n	71.94	1	72.0	0100		
20.	,,	"			1	71.8			
26.	,,,	"			1	70-9			
31.0	"	"	0.2n	70.22					
34.8		0.000	0.3	69.66	2	69.5			
39.	"	"	00	00 00	În	69.0	WE TO	THE HAR	
41.	"	99	0.70		1				
1	""	"	0.4	60.00	1	68.8		07.00	
46.	99	. 59	0.4	68.00		25.5	1	67.92	
60.8	"	"	1.0	65.78	6	65.7	3	65.75	
67.	"	,,	0.3n	64.73	1 1	17.10	THE WALL		
74.	,,	,,	0·1n	63.68	lu	63.7		-	
79.	,,,	27	333	The same	- 1n	63.1	E GAS	12123	
80:	"	,,	0.4	62.85			PHO I	THE BEAL	
85	"	"	0.5b	62.16	4	62.2	100		
85.				THERE	1	62.1		DOWNER BER	
89.	2,2	"	0.2n	61.44	î	61.5			
	"	"			-	01.0			
93.	"	"	0·1n	60.84		F0.0		-	
25914	"	"	1.2	57.71	1	56.8			
22.	99	1.06	0.5n	56.62	4	56.7			
24.	,,	,,,	0.2	56.25	2	56.2		1	
33.	,,	,,	0·1n	54.87	ln	54.8			
.39	,,	,,,	0.1n	54.12				1000	
49.	,,	,,	BEAT'S	The second	1n	52.6		4.350	
61.	,,		TEND .	THE REAL PROPERTY.	ln	50.8		13-0	
62		"	0.3n	50.58		000		THE REAL PROPERTY.	
66.	32	"	0 011	00 00	1n	50.1			
73	"	99	0.4	49.00	1	49.0	1 392		
	"	99							
78.	"	,,	0·1n	48.31	ln	48.5"		315	
84.	"	99	0.2n	47.41	1	47.5	14.54.5		
88	"	"	0·1n	46.82		5 7	Marine.	Total Re-	
93.	99	,,	0.2n	46.07	1	46.0		1000	
99.	,,	,,	0·1n	45.16	1	45.1		134	
26003	,,	,,	1973 3		1	44.7		133	
13.	"	,,	0.2n	43.05	STILL	FERENCE		100	
15.	"	"			In	42.8	-	9 5 5 5	
19.			HE TO		1	42.2		AT SO VEL	
22.	"	,,		1	î	41.8	MAN SA	1	
37.	,,,	99	1 1 1 1	N H SA	1	39.6	155 18	A RANGE	
	"	"	0.57	20.15				5 Sept. 198	
40.	"	"	0.5b	39.15	2n	39.2	TY I		
48.	"	"	0.1	37.86	2	37.7	130	De la constant	
60.	,,,	"	0·1n	36.21	TOYSE!	and and	Discoul I	S. Rose S.	
63.	,,,	99	1	Marie Bar	1	35.8	STATE OF	18 18 18 18	
66.	,,	,,	0.2n	35.26	1	35.2	P 1 1 1 2 2		
74.	,,	11	0.1	34.06	1	32.7	E STORY	THE STATE	
85.	"	"	0·1n	32.47	1	THE PERSON	- F		
90.			0.5b	31.74	1	31.9			
91.	"	"	000	01 11	1	31.6	7 7 7 2	1	
	"	"	0.4	30.48	2		7 2 3	1000	
99.	"	,,,	0.4n	30.48		30.5		H	
26104	"	"		20.07	1b	29.8		1 63	
11.	,,	,,,	0.2n	28.61	. 100	1 3 2 3	WIFE.	MAN EL CA	
22.	,,	,,	0.2n	27.05	1	27.1	No. Take	Two laboratory	
44									

S

IRIDIUM—continued.

22

Arc Spectrum				Spark Spectrum					
Wave	-length	Inten- sity	Wave- length	Intensity	Wave- length	Intensity	Reduction to Vacuum		Oscillation
SULDE IN	1	and		and		and	F 83		in Vacuo
E LUE	Exner	Cha-	Exner	Cha-		Cha-		1	
Kayser	and Haschek	racter	and Haschek	racter	Lohse	racter	λ+	$\frac{1}{\lambda}$	THE STATE OF
7									-
	3825.2	2b	3825.2	ln	3825·13 24·62	0·2n 0·4	1.06	7.3	26135·3 39·1
	The Marie of		23.5	1	23.50	0.3n	"	"	46.7
			200		22.32	0.4	"	"	54.9
					21.58	0·1n	"	"	59.9
					20.99	- 0·1n	,,	,,	63.9
			20.0	1n	19.95	0·1n	,,	,,	71.0
	100		100 H		19.52	ln	,,	,,	74.0
			19.2	ln	19.19	0.3	* **	,,	76.3
		WEST.		156 -10	18.82	0.2	,,	,,	78.8
	77 40		18.6	1	18.33	0.1	,,	,,,	82.2
817.385	17.40	3	17.3	4	17.42	1.0	"	7.4	88.4
		49 1	15.5	1	16.59	0·ln	1.05	,,	94.0
	THE REAL PROPERTY.		15.7	1	15·70 15·10	0·2 0·1n	. "	"	26200·1 04·2
		165 1872	14.7	1	19.10	OIII	,,	"	07.
	100	alle state	14.5	î		HEIT A	"	"	08.
		5-15	13.8	î	13.91	0.2n	"	"	12.4
			13.0	î	1001	-	"	"	19.
			12.8	î	12.89	0.5	"	,,	19.4
					12.40	0·1n	"	,,	22.8
			11.8	1			,,	,,	27.
		W. B	10.5	1	10.57	0.2b	,,	,,	35.4
			10.4	1	41 J. 34	1 9 9	,,	,,	37.
			09.7	1	09.81	0·1n	"	,,	40.6
	12 12 11 1	4 100	08.3	ln	08.83	0.2	,,	,,	47.4
	The Name of Street		07.1	1	06.86	0·1n	"	,,	61.0
	05.44	2n	04.6	1	06.09	0·1n	27	"	66.3
	05.44	211	04.1	1	04.77	0·1n	"	"	70.8
		DATE:	04.1	1	04.77	0.1	"	"	75.4
		377 197			03.80	0.4	"	"	82.1
	2 18 18 18	2 193			03.00	0.2	"	"	87.6
	Berlin -				02.53	0.2	"	"	90.9
00.243	00.25	10	00.2	8	00.29	2.0	99	"	26306-6
	3799.65	2n			3799.51	1.3	,,	"	11.3
799.047	99.05	3	3799.1	4	99.07	1.1	,,	"	15.0
	The state of the s	BENE	98.2	1	98.18	0.4	"	"	20.0
			98.1	1	96.77	0.3	,,	,,	30.8
	o de la	4 3 3	96.3	In	0 - 0 -	0.0	"	"	34.0
	THE PERSON	a	ST- Chr		95.97	0.2	"	"	36.3
94.211	94.20	4	04.1	4	95.56	0.1	"	- "	39.2
34.211	93.95	$\frac{1}{2}$	94·1 93·9	4	94·18 93·95	0.3	"	"	48.4
	99.90	4	99.9	4	93.95	0.2	"	"	50·3 54·2
	P. Control	12 10	91.6	2	99.40	02	"	"	67.
	THE PERSON NAMED IN	7 98	31 0	8 UB	90.67	1.0	"	"	73.2
	MINE TO	THE LOW			90.29	0.3	. ,,	,,	75.8
		Barry J	89.6	1	89.67	0.2	"	"	80.1
		S. D.		TELL BOOK	88.67	0·1n	"	,,	87.3
			87.4	1			,,	,,	96.
	NE CONTRACTOR		87.1	1	87.18	0·1n	"	,,	97.5
		THE PARTY	86.2	1	86.22	1.0s	,,	"	26404.2

IRIDIUM-continued.

Arc	c Spectrum			Spark S	pectrum		Reduc	tion to	
Wave-	length	Inten-	Wave- length	Inten-	Wave- length	Inten- sity	Vac		Oscillation Frequency
Kayser	Exner	and Cha-	Exner	and Cha- racter	Lohse	and Cha-	λ+	$\frac{1}{\lambda}$	Frequency in Vacuo
	Haschek	racter	Haschek	racter		racter		λ	1 2 5
					3784.85	0.3n	1.05	7.4	26413.7
					84.35	0·1n	"	,,	17.0
			3781.5	1	82·37 81·33	0.3n	"	"	31.0
			79.8	1	01 00	0 311	"	"	49.
			79.2	În	2 xxxxx		"	"	53.
	1300	- 9 5 1 4			78.85	0.1	,,	,,	55.7
		1000	77.7	1	77.73	0.5	,,	,,	63.5
		200			77.14	0.2	"	,,	67.7
		1 3 3 3	75.3	1	75.32	0.1	1.04	,,	80.4
	-		74·5 74·0	1 1	74.59	0.2n	,,	"	85.5
			71.8	1	71.76	0.2	"	7.5	26505.3
	3770.89	1	70.9	1	70.86	0.2	"	,,	11.5
	011000		70.4	ī			,,	. ,,	14.9
3768.817	68.83	1	68.8		68.84	0.4	,,	,,	25.8
	SAN NO.		66.6	1	67.48	0.4	,,	,,	35.4
			22.0		66.59	0.1p	"	,,	41.7
			66.3	1	00.10	0.0	"	,,	54.
			62.1	W	62.40	0.3n	"	"	71.3
			61.8	1	62.11	0.5	,,	"	73·3 76·4
	59.64	1	010		60.90	0·1n	"	"	81.9
	00 01		57.2	1	60.16	0.8	"	"	87.1
			0.0-7116		57.31	0·1n	,,	,,	26607.3
					56.69	0·1n	,,	,,	11.7
			56.0	1	56.11	0.4	,,	99	15.8
			55.7	1	FF 90	0.1	"	. ,,	19.
	432		54.8	1	55·29 54·68	0·1n 0·3	"	"	21·6 25·9
			53.4	1	53.60	0.4b	"	"	33.6
			00 1	1	53.08	0·1n	"	"	37.3
	0.00		2 1112-38		52.70	0.6	"	,,	40.0
			52.5	1	THE REAL PROPERTY.		,,	"	41.
		0 183	50.8	1	50.89	0·1n	,,	,,	52.8
50.539	50.55	1	50.5	2	50.53	0·2s	"	,,	55.3
47.950	47.90	5	48·2 47·3	$\frac{1}{6}$	47.39	1.0	"	"	72.
47.352	47.36	9	46.4	1	46.50	0.2	"	"	84.1
			46.0	1	1000	02	"	"	88.
					45.77	0.9	"	"	89.3
			45.6	2	THE THE		"	,,	90.
	734		45.2	1n			,,	,,,	93.
	-41		44.6	1	44.52	0.5b	,,	,,	98.3
			12.0		43.99	0·1n	"	,,	26702.1
		The state of	43.6	1		NT SE	"	"	05.
			40.4	1	43.02	0.8b	"	"	08.9
42.948	A PAREN	1	42.8	2	10 02	000	"	"	09.
28 010	42.44	2	42.4	ī	42.47	1.0	"	"	12.9
	Bian.		41.8	1	41.92	0.2n	,,	,,	16.7
	3203	NAC -	2 1 1 1 5 T		40.73	0.2b	,,	. "	25.2
		(A)	N. S. C. S. C.		39.63	0.3	77	"	33.1

IRIDIUM—continued.

Arc	Spectrum	De la		Spark S	pectrum		Dol	Alam A	
Wave-l	ength	Intensity	Wave- length	Inten- sity	Wave- length	Intensity	Reduc Vac	tion to uum	Oscillation Frequency in Vacuo
Kayser	Exner and Haschek	and Cha- racter	Exner and Haschek	and Cha- racter	Lohse	and Cha- racter	λ+	$\frac{1}{\lambda}$	in Vacuo
					3739-69	0·1n	1 04	7.5	26737 0
3738.682	3738.66	2	3738.6	4	38·67 36·19	0.3	1.03	"	40·0 57·7
34.900	24.00	3	24.0	6	35.60	0.1	,,	,,	62.0
34.900	34.90	3	34.8	0	34.54	0.1	"	"	67.0
			34.4	1			,,	,,	71.
			34.0	1	34.05	0.2	"	,,	73.1
			33·4 33·3	1	33.25	0.1	"	"	78· 79·8
			32.7	î	32.76	0.1	"	"	82.3
			32.1	1			,,	39	87.
31.504	31.51	2	31.3	6	31.51	0.8	"	, ,,	91.3
The same	30.58	3	30.6		30.60 29.75	1 0·2n	. 99	,,	97·9 26804·0
				10 11 11	29.40	0.1	"	"	06.5
	28.16	5	28.1	2	28.19	1.2	,,	7.6	15.2
			27.4	1	27.57	0.3n	,,	,,	19.5
	27.05	4	27.0	2	27·10 26·25	1s 0·3	,,	,,,	23·1 29·0
25.536	25.55	2	25.6	4	25.57	0.3	. 99	"	34.0
20 000	20 00		200	-	24.75	0.1	"	"	39.8
			0.77	The I	23.61	0.3n	,,	,,	48.1
22.904		3	22.9	2	20 55	0.0	,,	,,.	53.
			22·6 22·2	2	22·57 22·12	0.6	,,	,,	55·6 78·8
21.628		1	21.7	i	21.65	0.2	"	"	62.3
			21.2	1			99	,,	65.
		100		100	20.93	0·1n	99	,,	67.4
			17.6	1	19.51	0·1n	"	"	77·7 91·
	-	3	17.0	1	17.14	0.1	"	"	94.8
					16.34	0·1b	,,	. ,,	26900.6
		30	15.8	1	10000		,,.	,,	05.
			14.5	1	14.48	0·1n	,,	99	14.1
			F33 1 5 5	PAR S	13·85 12·86	0.1	"	"	18·6 25·8
12.630	12.66	2	12.7	4	12 00	00	"	"	27.3
		1	11.5	1			"	,,	36.
	421	201 E		- 11041	11.27	0·1n	,,	,,	37.3
	116		00.0	1	10.53	0·1n	,,	,,	42·7 55·1
	- 1		08.8	ln ln	08.83	0·1n 0·2n	,,	,,	59.8
07.147	07.17	1	07.1	1	07.14	0.3	"	"	67.4
			06.7	1	06.70	0.2	"	,,	70.6
		MAN AND	05.0	1	06.20	0·1n	,,,	,,,	74.2
	The state of	45-1-1	05·8 05·5	1	05.43	0.1	"	,,,	77· 79·8
	ELECTIVE SER		00 0	1	04.57	0·1n	"	,,	86.1
			03.7	1	THE STATE	F 1240	,,	3.	92.
01.00			03.5	1	03.40	0·1n	"	,,	94.6
01·107 3698·261	3698-25	2 2	3698.1	4	01·08 3698·27	0.8	,,	,,	27011·4 32·1

IRIDIUM—continued.

Arc	Spectrum			Spark S	pectrum		Reduct	ion to	
Wave-	length	Inten- sity	Wave- length	Intensity	Wave- length	Inten- sity	Vac		Oscillation Frequency
Kayser	Exner and Haschek	and Cha- racter	Exner and Haschek	and Cha- racter	Lohse	and Cha- racter	λ+	$\frac{1}{\lambda}$	in Vacuo
3696-308	3696-27	1n	3696·6 96·3	l ln	3696·71 96·23	0·2 0·3n	1.02	7.6	27043.5
3030 303	3030 21	111	96.0	1	95.74	0.2n	"	"	50.6
92.851	92.85	2	92.7	2	92.84	0.8	"	**	71.8
			92.3	6	92.44	1.0b	"	,,,	74.8
			137-131-14		90.86	0·1n	"	,,	86.4
00 450		0	00.4	0	90.17	0.3	,,,	,,	91.4
89·476 88·321		0	89.4	6	89.45	1.0 0.2n	"	>>	96·6 27105·2
88.921	87.24	1 2	88·2 87·1	1	88·26 87·24	0.5	"	2,9	13.0
	01 24		011	1	86.09	0·1n	99	"	21.4
		E R. FE	84.4	4	84.51	0.5	"	29	33.0
			83.6	1	83.71	0·1n	,,	2,	39.0
			83.0	1	83.09	0·1n	,,	7.7	43.4
			82.4	1	82.52	0·1n	,,	"	47.6
		LUTE THE	81.9	1	01 85	0.1	"	"	52.
	E Blogge		01.0		81.75	0·1n	>>	"	53.3
			81.6	1	81·10 79·58	0·1n 0·2n	"	"	58·1 69·3
			78.3	1	78.51	0.2n	"	"	77.2
			77.1	î	1001	0 211	"	"	88.
			76.7	i	76.83	0.2	,,	,,	89.6
75.160	75.15	5	75.0	8	75.16	1.0	,,	,,	27202.0
			74.0	1	74.26	0·1n	,,	,,,	08.7
			73.2	1	73.30	0·1n	"	"	15.8
			72.0	1	72.15	0.3	,,	,,	24.3
	See of		39 121		71.75	0.1	. ,,	,, 4	27·3 32·6
					71·03 69·70	0.5	"	"	42.5
	12 P.L.		68.2	1	68.36	0·1n	"	"	52.4
			67.8	î	67.92	0·2n	"	"	55.7
					66.35	0·1n	,,	"	67.4
			65.1	1	65.12	0.2b	,,	,,	76.5
64.780	64.77	5	64.7	4	64.78	0.8	,,	,,	79.1
			64.3	1	00 74	0.0	,,	,,	83.
	Marie Marie	7	63.5	1	63.54	0.3	"	"	88.3
61.867	61.86	5	63.3	4	61.88	0.9	"	"	27300.7
61.527	61.52	2	61.4	2	61.52	1.0	29	"	03.3
01011	0102		60.6	ī	0101		"	"	10.2
			STITLE.		60.18	0·1n	,,	"	13.4
			59.2	1		102,316	,,	"	21.
			58.7	1	200 014	-	,,	,,	24.
PH HH		0	· PM O		58.15	0.7	1,01	"	28.5
57.774		0	57.6	1	57.72	0·1n	1.01	"	31.5
	No. of the last of				57·06 55·05	0.1n	"	,,	51.7
		MATE IN	545	1n	54.55	0.2	"	"	55.4
	1000		54.0	ln	01.00	02	"	"	60.
53.358	-	1	53.2	10	53.34	2.3	,,	"	64.4
Day of the last			51.5	1n			,,	,,	78.
SID IN	1 3 3 5 5		50.3	1	50.47	0.1	,,	,,	85.0
47.857	47.85	2n	47.8	2		The state of	,,	,,	27405.7

IRIDIUM -- continued.

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			IRII	DIUM	continued.				
Ar	c Spectrum			Spark S	pectrum		Doduc	t.	
Wave-	length	Intensity	Wave- length	Intensity	Wave- length	Intensity		tion to	Oscillation Frequency
Kayser	Exner and Haschek	and Cha- racter	Exner and Haschek	and Cha- racter	Lohse	and Cha- racter	λ+	$\frac{1}{\lambda}$	in Vacuo
			3647.0	1	3647.02	0·1n	1.01	7.7	27411.9
0012 100	0015 15	W.			46.21	0·1n	,,	,,	18.0
3645.468	3645.47	1	45.4	ln.	45.34	0·1n	"	"	23·6 24·6
		16	44.0	ln	10 01	Ni in	"	"	35.
		172 63	10.0		43.29	0·1n	,,	,,	40.0
41.037	41.03	3	43.0	1	- 11	1	,,	,,	42·2 57·0
41.037	41.03	3	40.9	1	40.91	0.3b	"	"	58.0
	15 G L 1	With the	40.7	ī			"	"	60.
				100	39.72	0.1n	,,	,,	66.9
		11	38.8	1	38.95	0.1	"	7.8	72·6 78·
			38.1	ln	To The	F-13%	"	"	79.
		William	151		37.58	0.1	,,	,,	83.1
					37.19	0.ln	,,	,,	86.0
36.370	36.36	8	36·2 36·5	4 2	36.35	1.0	,,	"	92·2 91·2
			90.9	2	35.64	0.3	"	"	97.8
			35.0	1	35.08	1.0	,,	22	27501.9
	3	ATTAL			34.08	0.1	,,	"	09.5
			33.7	1			,,	,,	12.
			31·7 31·5	1 Fe?	1 6		"	"	28.
			30.8	ln	11 339		"	"	34.
29.911	29.91	3	29.9	1	To the		,,	"	41.1
		100	29.8	1	29.80	0.3p	"	"	41.9
29.317	29.31	2	29.3	1 4	00.00	1.10	"	,,	45·6 49·3
28.843	28.84	10	28·8 28·3	1	28.82	1.2	99	"	53.
	27.95	1	27.9	1	A STEEL	1	"	"	56.0
		DE LES	26.7	1	26.88	0.2n	,,	,,	64.1
26.460	26.44	5	26.4	4	26.44	0.6	"	,,	67.4
25.872	25.87	3	25·8 25·4	2	25.89	0.3	"	,,	71.7
			24.7	1			"	"	80.
			24.3	î		10429	,,	"	84.
23.976	23.95	3	23.8	1	23.97	0.2n	,,	,,	86.3
		4	22.0	1			,,	- "	27601.
			21.7	1	20.54	0·1n	"	"	04· 12·
	1 15 15		19.9	1	19.94	0.1	"	"	17.
19.236	19.30	2	19.3	2			,,,	"	22.1
	-		17.9	1			1.00	,,	33.
17.378	17.37	8	17.3	4	17·39 16·62	0.7	,,	,,	36·5 42·2
			16·4 15·6	1	15.68	0·2n 0·1n	"	" "	49.5
	1045		14.5	î	14.59	0·1n	"	"	57.8
		47			13.95	0·1n	,,	,,	68.7
		15	William Co.		13.28	0·1n	,,	,,	67.9
09.933	09.91	8	SE 1965		12·59 09·94	0·2n 0·5	"	"	73·2 93·6
09.999	09.91	0	09:0	1	09.94	03	"	"	27701

IRIDIUM—continued.

Arc	Spectrum	1		Spark S	pectrum		Reduc	tion to	Oscillation Frequency
Wave-	length	Inten- sity	Wave- length	Intensity	Wave- length	Inten- sity		uum	
Kayser	Exner and Haschek	and Cha- racter	Exner and Haschek	and Cha- racter	Lohse	and Cha- racter	λ+	$\frac{1}{\lambda}$	in Vacuo
	100		3607.3"	1			1.00	7.8	27714
3605.958	3605.99	3	05.9	10	3605.99	2.5	"	,,	23.9
		F	04·9 04·5	1	04.67	0.8	"	,,,	32· 34·0
			03.8	1	03.96	0.2	29	99	39.5
			02.2	î	00 00	02	"	"	53.
01.568	01.56	4	01.5	î	01.59	0.3	. "	"	57.9
			00.5	2	00.54	0.1	"	"	65.8
	230 1-1		3599.8	1	3599.94	0.5	"	"	70.6
98.936	98.91	3		3 3	98.92	0.3	,,	,,	78.3
		8 3 1 3		1	98.29	0·1n	,,	"	83.1
		F P P P			97.9	0·1n	"	"	86.1
96.356		0	96.4	1	97·30 96·37	0.2	,,,	"	90.8
00 000		0	95.6	1	3031	11	"	"	27804
			95.0	i	1 1000		"	7.9	08.
94.557	94.56	5	94.5	4	94.60	0.8	"	,,	11.8
94.308	94.30	3	94.3	1	TO STATE		,,	,,	13.9
	93.16	3 Ru?	93.1	2	93.21	1.1	,,	,,	22.6
			92.2	1			"	,,	30.
	() () () ()		91.9	1	01.55	0.1	"	,,	32.
		10 E	91.3	1	91.55	0·1n	"	"	35·2 37·
		g M	91-3	1	89-90	1·1n	"	"	48.
Wall Tool	89.34	3 Pt?	89.3	2	89.43	1.1	"	"	52.
			88.9	ln			"	"	56.
		B.T. OF	88.3"	1n	No. of the		,,	"	60.
			87.3	1	87.41	0.3p	,,	. 39	67.4
		and the	87.1	1	00.00		"	"	70.
	A Roote	Water -	86.3	1	86.39	0·1n	"	"	75.3
	THE REAL PROPERTY.		85·8 85·3	l ln	85.50	0·1n	"	"	80· 83·2
			84.6	1	84.72	0.2n	"	_"	88.3
ARE DE			83.5	2	83.62	0.2n	"	27	96.8
	83.24	10 Rh		2	83.30	0.1	"	. 99	99.6
		Section 1	81.0	1	80.97	0·1n	,,	"	27917.5
		1	78.2	1				,,	39.
			77.7	1	-	0.0	0.99	"	43.
			77.3	1	77.24	0.2n	,,	"	46.6
		The state of	76·9 76·3	1			"	"	49· 54·
3161 = 3			75.9	1			"	"	57.
STEP ST	1888		75.6	î	B - 5%	F 1 - 1 - 1	"	"	59.
2000		17 6	75.2	î	DE POL		"	"	62.
			74.9	1n			,,	"	65.
30.00			74.6	1	74.75	0·1n	,,	,,	66.1
573.888	73.89	10	73.8	8	73.87	1.45	,,	,,	72.9
	F1 91 - 1-1		73.1	1	-14		"	,,	79.
		100	72·9 72·5	1		F 1 - E	23	"	80· 84·
STIPE		255-	72.1	1			"	"	84.
THE PERSON	STATE OF THE		71.9	1	BE PAR	85.3	"	"	88.
			70.7	i	70.74	0.4	"	"	97.5

IRIDIUM-continued.

	ion t-	Dodenst		pectrum	Spark S		-	Spectrum	Arc
Oscillation Frequency		Reduct	Inten-	Wave- length	Inten-	Wave- length	Intensity	length	Wave-
in Vacuo	$\frac{1}{\lambda}$	λ+	and Cha- racter	Lohse	and Cha- racter	Exner and Haschek	and Cha- racter	Exner and Haschek	Kayser
28003	7.9	0.99			1	3570.0			
03.7	,,	,,	0.1	3569.95		00.5			
07.	,,	, ,,	2.	60.17	1n 2	69:5 68:1			3568-156
23.7	"	"	0·1n	68·17 67·40	4 .	00.1	1		9909.190
30.1	"	"	0.5	66.59					
42.9	,,	,,	0.2n	64.96	1	64.8			
58.2	,,	,,	0·1n	63.02	1	63.0			
60.1	"	"	0.1	62.78			4 2	Sept Line	
73.9	"	,,	0.5	61.03	1	61.5			
78· 82·	"	99			1	60.5"			
82.4	"	"	0.2	59.95	1	00.0	14 - 14 1		
84.	"	"	02	00 00	1	59.8		- 17 B	Table .
88.6	"	"	1.	59.17			8	3559.15	59.160
96.	,,	"			1	58.2"		4 6778 E	
28102.9	,,	22	1.	57.36	4	57.3	5	57.35	57.325
09.	"	,,,	0.		1	56.6	F. 1976		
14.4	"	"	0·1n	55.90	1	55·9 55·8			
24.	"	"			1	54.7	100		
29.	"	"	0.1	54.05	i	53.9			
32.	"	22			i	53.7		5 2	
35.3	,,	55		To The	FOR THE PARTY	EL CON	2 Pd?	53.26	
40.	,,	29		The state of	1	52.7		-	
43.1	"	"	0.1	52.31	2	52.2	2	52.27	52.223
48·0 56·	8.0	"	0.1	51.54	1	51.4			
59.	,,	"			1	50·7 50·3		THE	
63.1	"	"	0·1n	49.74	1	000			
70.8	"	22	0·1n	48.77	2	48.7			
83.	,,	,,			lu	47.2			
88.	,,	,,	LET MI	FREER	1	46.5	ln	46.60	
91.	99	23			1	46.2		ite le	
94.	"	"	311	10 10 10 10 10 10 10 10 10 10 10 10 10 1	1	45.8			
28203	"	"	Par I Par	1983	1	45.2	(A-1)		
07.5	"	"	0·1n	44.15	1	44.2	1		
13.	"	"	0·1n	43.46					
17.6	"	"	0.1	42.88	1	42.7	13.4		
24.	"	"		113,245	1	42.1	3 3 3	1	
26·1 28·	,,	"	0·1n	41.81	1	43.0	3170	1 32 3	
34.	,,	"	1000		1	41.6		1 7 1	
44.8	"	"	0.2	39.47	1	40·8 39·5			
51.	"	,,,	02	0041	1	38.7			100
55.8	"	"	0·1n	38.10	1000	001		ME AND	The second second
60.	,,	0.98		1 100	1	37.6		BANK TO SERVICE	
63.	99	,,		I Ess	1	37.2	13.34		
65.	"	"	Post of the second	湯を	1	36.9	9.5		Total In
69.	"	"		HAR-HE	1	36.7	1942		
72.6	"	"	0.4	35.99	1	36·4 35·9	3 6 0		
85.	"	"	1	00 00	1	34.5	ALL SE	1 100	W 196, 413

IRIDIUM-continued.

Arc	Spectrum			Spark S	pectrum		Rodro	tion to	1
Wave-l	length	Inten- sity	Wave- length	Inten -	Wave- length	Inten- sity		uum	Oscillation Frequency in Vacuo
Kayser	Exner and Haschek	and Cha- racter	Exner and Haschek	and Cha- racter	Lohse	and Cha- racter	λ+	$\frac{1}{\lambda}$	in Vacuo
			3534.3	1			0.98	8.0	28286•
			00.4		3532-99	0·1n	"	"	96.6
			32·4 31·7	1	32.41	0.1	"	99	28301.3
			31.5	1	31.47	0·1n	"	"	07.
			30.8	i	30.88	0·1n	"	"	13.6
			28.7	i	28.75	0.2	"	"	30.6
	30 373			ming.	28.15	0.3	"	"	35.5
OFFICE STATE	Age Page	100	26.8	1	26.87	0·1n	"	,,	45.8
	300		24.0	1	1 1 1 1		"	"	69.
	Sec. 11.	3 11 11	23.4	1			,,	,,,	74.
3522-191	3522-21	6	22.4	4	22.17	0.6	,,	,,,	83.3
	CHIEF ST		20.3	ln	20.19	0:1n	,,	,,	99.6
	33-1-1	1	19.7	1	10.0=	0.7	,,	"	28404
			18.6	1	18.85	0·1n	"	,,	10.4
			19.0	1	17.03	0·1n	,,	"	12.
16.110	16.11	6	16.0	4	16.07	0.3	"	- >>	25·1 32·6
10 110	10 11	0	100	7	14.60	0.1	,,	"	44.7
13.807	13.82	10	13.7	6	13.80	1.2	"	"	51.1
12.356	12.36	3	12.3	2	12.35	0.1	,,,	"	62.9
12.054	12.04	3	11.9	1	12.04	0.1	"	"	65.4
10.793	10.80	3	10.7	1	10.79	0.2	"	"	75.6
			10.3	1	DATAL		"	8.1	82.
			09.4	1	09.37	0.5	"	,,,	87.
			09.0	1			"	,,,	90.
08.731	08.71	1					,,,	,,,	. 92.5
			08.4	1	0		,,	,,,	95.
	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		000		07.64	0.2	>>	,,	28501.1
THE STATE OF THE S	200		06.2	l ln	06.13	0.1	>>	"	13.4
			03.7	ın	04.78	0·1n	99	"	21.
			04.3	1	04 10	0.111	"	"	28.
03.088	03.09	2	03.0	1		ALC: NO	"	19	38.1
00 000	00 00	-	000		02.69	0.3	"	"	41.4
			01.6	ln	02 00		"	"	50.
		a man	00.8	1	00.85	0.1n	"	,,,	56.4
			00.5	1n			,,	,,	69.
3499.271		1	3499.0		3499.08	0.9		,,	70.8
			98.3	1			0.97	,,	77.
			97.8	1			,,	,,	81.
001500	9400 50	13.	00.5	0	97.14	0.2	,,	,,	86.7
96.580	3496.59	1	96.5	ln			"	,,	91.2
			96.0	ln	95.93	0·1n	"	"	96.
		100	95.5	ln	99.93	0.111		"	96·5 28600·
94.787	94.79	3	94.8	2	94.81	0.1	"	"	28000
01 101	0110		93.7	1	0101	01	,,	"	15.
		32 32	93.2	î			, ,,	"	19.
92.217	92.21	1	92.3	i		200	"	"	27.0
			92.0	1	ALL REGIS	34 41	,,	"	29.
			91.3	1	1 1 1	1	"	,,	35.
		S-2.5	89.2	1	B P S S S S		,,	,,	38.
			90.9	1		No.	,,	"	41.

IRIDIUM-continued.

			1		continued.		-	-	T
Are	e Spectrum			Spark S	pectrum		Reduc	tion to	
Wave-	length	Inten- sity	Wave- length	Intensity	Wave- length	Intensity		uum	Oscillation Frequency in Vacuo
Kayser	Exner and Haschek	and Cha- racter	Exner and Haschek	and Cha- racter	Lohse	and Cha- racter	λ+	$\frac{1}{\lambda}$	in Vacuo
			3490.5	1			0.97	8.1	28652
3488.727	3488.73	3	88.7	1	19149		,,	,,	55.7
	1 6 11		88.2	- ln	103/10		,,	,,	60.
			87.6	1 .	44477	1 3 3	,,	,,	65.
		55311	86.2	1		1	,,	,,	77.
85.660	85.68	3	85.6	1	1	Hillian	,,,	,,	80.8
84.649	84.66	4	84.6	1	3484.65	0.1	,,	,,	89.2
84.256	84.26	3	84.3	1	84.21	0.1	"	,,	92.5
	83.63	1	09.0				"	"	97·6 28701·1
00 500	00.70	4	83.2	1	82.73	0.1	"	"	04.7
82.760	82.78	4	82.5	1	82.13	0.1	"	"	07.
	200		81.5	1			"	"	15.
			010	1	81.35	0·1n	"	"	16.
81.254	81.26	3			01 00	0 111	"	"	17.2
01 201	01 20		80.7	ln	1 34.3	1820	,,	"	22.
			79.9	1			"	"	28.
		Carrier 1	79.4	i	79.50	0.1	,,	,,	31.7
77.930		1	78.0	2	77.90	0·1n	,,	77	44.8
76.611	76.60	3	76.7	2	76.62	0·1n	>>	,,	55.6
	1 3 11 16 18		76.3	1			,,	"	58.
76.182	76.17	1		1			,,,	,,	59.1
			75.8	1	-4: 110		, ,,	,,	62.
					74.96	0·1n	,,	"	69.2
			74.5	1	(C.D. Des		,,	,,	73.
					74.36	0.1n	,,	"	74.2
Mark .		G PA	73.6	1		and the same	- "	"	80.
		R SH X	73.3	1			,,	"	85.6
	72.98	1	72.7	1			"	,,	94.
		4 . 3	72.0	1	• 70.85	0.1	"	8.2	28803.2
	100	7 7	70.2	1	. 10.00	01	"	1	09.
	69.79	2	10.2	1	SAUST		",	,,	11.9
68.749	68.75	2		20			"	"	21.5
00.149	68.02	ĩ	68.1	1			,,	,,	26.7
	00 02		67.1	1			,,	,,	34.
			66.2	1	1		72	,,	42.
65.390	65.39	3	65.5	2	65.38	0.1	,,	,,	48.6
	142111111111111111111111111111111111111			LIES TO	62.23	0.1	,,	,,	74.9
			61.8	1			,,	,,	79.
			61.3	1			,,	,,	83.
	-	E 5 1	60.0	ln		0.7	,,,	,,	94· 28903·1
			58.8	2	58.85	0.1	0.96	,,,	09.4
	58.10	2	PH 4				99	"	15.
	FF 0-	30.00	57.4	1n	1000	100000	,,	"	16.5
FF 040	57.25	1	56.0	1 3	BA		, ,,	,,	27.4
55.949	55.95	1	56·0 55·1	1	The state of	1	,,	"	35.
	944		52.1	1		123 115	,,	"	60.
	18 18 11 11		51.7	1		12331	"	,,	63.
50.916	50.93	1	51.0	1		F TRUE	,,	,,	69.6
90.910	00.99	•	50.3	1	13 130		"	,,	75.
49.133	49.13	10	49.2	4	49.10	0.3	,,	,,	84.7
48.621	48.61	1	48.8	i			, ,,	,,	88.9

IRIDIUM-continued.

Arc	e Spectrum	1		Spark S	Spectrum		D. 1	1 000	27.
Wave-	length	Inten- sity	Wave- length	Inten-	Wave- length	Inten-	Reduc	tion to	Oscillation Frequency
Kayser	Exner and Haschek	and Cha- racter	Exner and Haschek	and Cha- racter	Lohse	and Cha- racter	λ+	1 _ \lambda	Frequency in Vacuo
	3447.90	1	3448.0	1		18 7	0.96	8.2	28995
3446.793	46.79	2	46.8	1	0.1.0.10		,,	,,	29004.3
46.476	46.49	2 0	46.4	1	3446.48	0.1	"	99	06.9
45.682	a second	0	45.5	ln	Marie S		>>	"	13.6
			44.2	1	40.71	0·1n	,,	"	26.
			39.0	1m	40.71	0.1n	"	"	55.6
38.244	38.21	2	38.2	ln ln		119	"	"	70.
37.670	37.65	4	37.6	4	37.69	0.3	"	**	76.6
37.189	37.20	10	37.2	6	37.19	0.3	"	"	81.3
37.199	31.20	10	31.2	0		0.1	"	"	85.3
35.554	GREETS!	0		77 -67	36.88	0.1	"	"	88· 99·2
35.200	200	0					.99	"	29102.2
34.915		2			35.07	0.2n	"	,,,	04.6
33.475	33.46	2	33.4	1	39.01	0.711	"	>>	16.9
32.930	32.92	1	39.4	1			"	8.3	21.4
32 330	32.20	i	32.3	1			"		27.5
	32 20	- 5	31.6	1		The second	"	"	33.
31.476	31.45	1	31 0	-		EM CO	"	"	33.8
30.941	30.94	1	31.1	1		100000	"	"	38.2
30.197	30.20	î	30.0	i		ROME .	"	"	44.5
29.748	00 20	0	300	-		153	"	"	48.4
29.026	29.01	2	29.1	1			"	"	54.6
	20 01		28.6	î			,,	"	58.
	28.47	3	1000	100	28.47	0.1	,,	"	59.2
		186	28.3	1			,,	,,	61.
		Mary 3	27.7	1	100	THE RES	,,	"	66.
			27.3	1			,,	,,	69.
		7-4-1	26.8	1n		8	,,	"	74.
		ESONA!	26.0	1n	1.1.55		,,	,,,	80.
25.526	25.50	1	25.5	1			,,	,,	84.4
24.854	24.85	3	24.9	1	1 338		,,	"	90.0
			23.9	1			"	,,	98.
21.923	21.93	2	22.0	1	OF USE		,,,	,,	29215.0
		E S	21.5	1	130		,,	,,	19.
20.895	1 S. 1 A	0					,,	,,,	23.8
20.646	20.64	3	20.8	- 1	13 13 15	Re la	"	,,	26.0
20.111	7	0	20.2	1	1 1 1		99	,,	30.5
19.592	19.57	3	19.6	2	Far Ser		,,	,,	35.0
18.533	18.54	1		-	F1 (5 3)		"	,,	44.0
	1 30 3	W. TO	17.5	1	17.46	0·1n	0.95	"	53.2
10 150	The second	M. ST	16.3	1	1 3 4 0		- >>	,,	63.
15.906	15.87	2	15.8	1	TO VIE		,,	,,	66.7
15.408	15.39	3	15.4	In	Contract of the Contract of th		,,	"	70.8
	THE REAL PROPERTY.	1500	14.9	1	May be		,,	>>	75.
100		1	13.4	1	1		"	,,	88.
12:762	12.75	2	12.6	1		1304	,,	,,	93.5
11.730	11.72	2	11.7	1		1	,,,	"	29302.3
1/1 10		1 1 1	10.3	1	Alterial Control	A TOP	,,	,,	15.
10.180	10.19	1	10.2	1			,,	"	15.6
00.931	09.91	1	10.	1	1333	The second	"	"	17.9
	09.40	ln	09.5	1	08:32	0·1n	* **	,,,	22·4 31·7
							,,,	99	

IRIDIUM-continued.

Arc	Spectrun	1		Spark S	Spectrum		D. 3	42.	
Wave-	length	Inten- sity	Wave- length	Inten-	Wave- length	Inten- sity		etion to	Oscillatio. Frequency in Vacuo
Kayser	Exner and Haschek	and Cha- racter	Exner and Haschek	and Cha- racter	Lohse	and Cha- racter	λ+	$\frac{1}{\lambda}$	m Vacuo
	2000	-	3403.6	1n	THE RES		0.95	8:3	29372-
3402.962	3402.95	2	03.0	1	P. T. IN		,,	,,	77.8
02.182	02.17	2 3	01.0		100		,,	"	84.6
01.927	01.92	3	01·9 3398·3	ln ln		I BEE	,,	"	96.8
			97.5	1			"	"	25.
			97.1	î	100000		"	,,	29.
			96.3	1	12 19		,,	,,	36.
APIN I	THE VALUE		96.0	1			,,	8.4	38.
3395.129	3395.14	3	95.2	2	The Line		,,	,,	45.5
			93·6 92·7	1 2			,,	"	59.
	100	1.	91.5	1			"	"	67.
91.032	91.05	1	91.1	î			"	,,	81.0
89.473	01.00	î	011				"	"	94.7
2011	E PARTY		88.9	1	- 1		,,	,,	29500
88.158	88.15	1	88.1	1			,,	,,	06.2
88.023	88.05	1				1	,,	,,	07.1
00.000			87.8	· 1			,,	"	09.
86.678	86.34	0 3	86.4	1	FE PAR		,,	"	19·0 22·1
86.330	85.91	1	00.4	1			"	"	25.7
85.752	85.76	2	85.7	1			"	"	27.1
85.272	85:27	2	85.3	i	77 77 78		"	,,	31.3
5 1 3			85.0	1			"	,,	34.
83·917 83·474	83.91	1 0	83.9	ln		- 20	"	"	43·2 47·0
00 111			82.2	1			,,	"	58.
THE STATE OF	THE STATE OF		81.6	1			,,	,,	63.
518			81.3	1		200	,,	,,	66.
81.151	81.18	3		H.A.			,,	,,	67.2
79.993	80.01	1	80.0	1			99	"	77.4
78.550	THE REAL PROPERTY.	0n	79·5 78·5	1			,,	"	82· 90·1
78.219	COMPANY	On	78.1	1			,,	"	93.9
77.288		On	101				0.94	"	29601.2
76.146	76.15	1	76.2	1	The state of		"	,,	11.2
CIN			75.5	1n			,,	,,	16.8
74.942		0					"	"	21.7
74.597	74.61	1	74.6	1	HOUSE.		"	"	24.7
70.000	74.16	1	74.1"	1		1000	,,	"	28.6
72.958	72.96	1 4	72.7	2 2	B DE		,,	"	39·2 51·1
71.594	71.60	3	71.5	1		2 3 1 1	"	,,	58.3
10 100	69.14	1	101	3416	The same	E 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	"	"	72.8
68.640	68.64	8	68.0	1	3468-57	0·ln	,,	*,	77.2
67.210	67.21	2					"	,,	89.8
67.063	67.09	2	67.0	1			,,	,	91.0
(S.		22 112	66.6	1		1	,.	•,	96.
THE RESERVE OF THE PARTY OF THE		- 10	66.3	1			,.	"	98.
CE.CEO	05.00	1	GF C	7	100000		1000		90709.0
65·678 65·273	65.69	1 0.	65.6	1			"	"	29703·2 06·9

IRIDIUM—continued.

		III	DIUM—concent	·····			<u> </u>
Aı	rc Spectrum	1,83	Spark Spe	ectrum		tion to	
Wave-	length	Intensity	Wave-length	Intensity	Vac	uum	Oscillation Frequency
Kayser	Exner and Haschek	and Character	Exner and Haschek	and Character	λ+	1 - \lambda	in Vacuo
3364.380	3364.40	2	3364.4	1	0.94	8.4	29714.7
			61·8 61·6	1 1	"	"	38.
			61.2	1	"	"	43.
60.950	110	7			"	8.5	45.0
			60.2	1n	"	,,	. 52*
60.038	60.00	ln	70.0		. ,,	,,	53.1
	59·90 59·63	3 2	59·9 59·7	ln l	"	"	54·3 56·7
59-262	99.03	0	99.1	1	"	"	59.9
00 202			58.3	1	. "	99	68.
			58.2	i	"	"	69.
56.697		0	, FE		,,,	29	82.7
56.342		0			,,	99	85.8
55.942	55.95	2	55.9	1	,,,	"	89.3
55.739		0	55.5	1	,,,	"	91.2
			55.3	1	"	"	95.
53.696	53.70	1	53.7	i	"	"	29809.3
52.987	53.00	2	52.9	i	,,	,,	15.6
			52.3	ln	,,	,,	22.
			51.5	ln	,,	,,	29.
			50.2	1	,,	,,	40.
		Mary W	50.0	2	>>	"	42· 59·
48.015		1	48·1 48·0	1	"	"	60.0
47.695	47.72	2	47.6	1	"	99	62.7
46.609	46.61	1	46.6	În	.19	"	72.5
			45.5	1	"	"	82.
			44.7	ln	"	,,,	90.
44.360	44.36	2	44.4	1	,,	"	92.6
43.745	43.55	ln	43.1	1	"	"	98·9 29903·1
43·182 42·930		0	45'1	1	"	"	29903.1
±2 550		U	42.5	1	"	"	09.
			42.0	În	"	"	14.
		STATE OF	41.0	1	,,	,,	23.
40.485	40.50	3	40.6	1	,,	,,,	27.2
	90 70		40.3	1	"	"	29.
39.532	39·70 39·56	ln 4	39.6	1	"	22	34·3 35·6
39.028	99.90	0	EST BULL		"	"	40.3
38.535	38.56	5	38.5	2	0.93	, ,,	44.6
37.985		1	37.9	2	,,	,,,	49.7
37.637	71333	0	37.5	1	"	"	52.8
36.195	36.21	1	36.2	1	,,	,,	65.7
25,105	TISTING S	0	35.7	1	99	,,	70.
35.185		0	34.9	1	"	,,	74·8 77·
34.318	34.35	6	34.3	4	"	"	82.5
33.600	0100	0	010		"	"	89.1
30.968		0	27.9	1	"	,,	30012.6
27.688	18 43 43	0	The state of the s		,,	"	42.4
27.039	27.04	2			,,	,,	48.3

S

IRIDIUM-continued.

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Ar	c Spectrum		Spark Spe	ectrum	Reduc		
Wave-	length	Intensity	Wave-length	Intensity	Vacı	aum	Oscillation
Kayser	Exner and Haschek	and Character	Exner and Haschek	and Character	λ+	1_ \(\lambda\)	in Vacuo
3326.687	A COLUMN	0		2 816	0.93	8.5	30051.4
26.245	3326-25	1	3326.3	1	"	,,	55.4
26.056		0			,,	"	57.1
	25.58	1	25.5	1b	,,	,,,	61.4
			23.9	1	"	8.6	77.
23.011	23.03	4	23.1	2	"	"	84·5 86·
00.770	22.77	5	22·9 22·7	4	"	"	86.9
22.750 21.901	2211	0	22 1	4	,,	"	94.6
21.901		0	20.7	1n	"	"	30106
20.504		1	THE RESERVE		"	"	07.3
19.680		Ō			,,	23	14.8
19.231	19.25	1	19.2	In	,,	"	18.8
18.812		0		LI SWISS	,,	99	22.6
18.596	18.60	1	18.6	ln	"	,,	24.6
17.664		0		100	99.	29	33.1
17.457	17.45	1	17.5	1	,,	"	35·0 41·1
16.771	16.80	2	16.7	1	,,	"	43.4
16.534		On O			"	"	47.1
16·129 13·472	PART IN THE	0		A STATE OF	"	,,,	71.2
12.268	12.31	4	12.3	1	"	"	82.0
11.365	12 01	Ô	11.3	În	"	,,	90.4
11.161	11.16	1		LT ALL	,,	,,	92.3
10.674	10.69	5	10.7	2	,,,	,,	96.6
10.032		0			,,	,,	30202.6
09.535	09.55	1	09.6	1	,,	,,	07.0
08.939	00 44	0	P SHOP TO SE		,,,	99	12·6 15·9
08.581	08.57	ln	07.8	ln	> > >	"	23.2
07.774	07.78	1	06.6	111	"	99	34.
05.980	05.99	1	06.0"	ln	"	99	39.6
05.787	05.80	î	000		"	"	41.3
00 101	00 00		05.2	1	99	"	47.
05.057	05.07	2			,,	,,	48.0
04.460		0			,,	99	53.5
03.771	03.78	2	03.7	1	"	"	59.8
03.236	03.24	2	00 =	15000	"	"	64.7
07.000	E TOTAL CO.		02.7	ln	,,	"	77.0
01.900	THE YEAR	1 0	02.0	1	"	"	78.5
01·735 01·502		0			"	"	80.6
00.732	CIK SOME	0			"	"	87.6
00 102			3299.3	l n	0.92	,,	30301
			99.0	1	,,	,,,	04.
		1 6.0	98.3	1	,,	,,	10.
3297.655	3297.65	2	97.6	1	"	,,	16.0
HE !	Ship in	NA SE	97.4	ln	,,	"	18.
95.220	95.24	2	95.3	1	"	"	38.3
01000			94.7	1 1	"	"	47.3
94.251	-14	0	94.3	1	"	99	48.2
94.150	Ly Figs		93.6	1	"	99	53.
	- 24	-	93.3	i	"	"	56.

IRIDIUM-continued.

Aı	c Spectrum	100	Spark Spe	ectrum		tion to		
Wave-l	ength	Intensity	Wave-length	Intensity		uum	Oscillation Frequency	
Kayser	Exner and Haschek	and Character	Exner and Haschek	and Character	λ+	1 - \lambda	in Vacuo	
			3292.6	1	0.92	8.6	30363	
			92.2	ī	99	,,,	66.	
			91.6	1	,,	,,	72.	
3291.187		0	91.4	1	,,	,,	75.6	
91·010 90·640		0	00.0		"	,,	77.2	
90.040		U	90·2 89·2	1	"	"	80.6	
			88.7	1	, ,,	8.7	94.	
		1 1 1 1 1	88.4	1	"	"	99.	
87.726	3287.72	5	87.7	1	33.	"	30401· 07·5	
87.198	87.20	4	87.2	i	"	"	12.3	
85.721	0.20	0	85.7	În	"	"	26.0	
84.695	84.69	2	84.6	2	"	"	35.5	Ì
84.456		1	MANAGE VIEWS		"	"	37.7	
			84.0	1	"	"	42.	
82.458	82.46	2	82.5	1	"	"	56.3	ı
		A KARDA	82.3	1	"	"	58.	j
82.024		0			,,	"	61.3	
	81.85	1	81.8	1 -	,,	,,	67.9	ı
William Harris			81.2	ln	,,	,,	68.	
80.705		1	80.6	1	,,	,,	72.5	ı
80.011		0		5183	,,	,,	79.0	ı
		1000	79.6	1	,,,	99	83.	
	MO 47		79.1	1	,,	"	87.	ı
	78.41	1	78.2	1	"	"	93.9	ı
77.422	77.41	5	77.9	1	"	,,,	99.	ı
76.291	76.28	1	77·4 76·3	1 1	"	"	30503.1	I
75.735	75.74	9	10.9	1	"	"	13·7 18·8	1
75.452	75.45	2 1	75.6	1	99	"	21.4	ı
75.167	75.15	î	75.0	î	"	"	24.0	ı
74.686	74.68	2	100		"	"	28.6	
SILLER			74.2	1	"	"	33.	
72.772		0	72.7	1	"	, ,,	46.4	
			72.5	1	"	,,	49.	
71.936	71.94	3	71.8	1	,,	99	54.2	
71.372	71.38	4	71.4	1	,,	,,	59.5	ı
69.835		0			,,	,,	73.9	
			69.5	1n	,,	,,	77-	
68.663		0	68.7	1	- ,,	,,	84.9	ı
07 000			68.5	1	,,	,,	86.	ı
67.236	67.22	1	67.2	ln l	,,	,,	98.3	ı
66.580	66.59	8	66.5	2	"	"	30604.3	
65.399		0	64.0		"	"	15.4	
			64.6	1	"	"	23.	
63.436	63.44	1n	64.3	1	"	"	26.	
63.062	63.09	11	63.1	1	"	"	33.8	
62.852	62.85	1	09.1	-	"	"	37·2 39·3	
02 002	02 00	1	62.6	100	"	"	39.3	
62.147	62.15	5	62.1	2	"	99	45.9	
	02.10		61.4	î	"	"	54.	
		at the said			"	99		
MARCH STATE		2000	61.0	ln l		,,	57.	

IRIDIUM-continued.

A	rc Spectrum		Spark Spe	ectrum		etion to	
Wave-	length	Intensity	Wave-length	Intensity	Vac	uum	Oscillatio Frequency
Kayser	Exner and Haschek	and Character	Exner and Haschek	and Character	λ+	$\frac{1}{\lambda}$	in Vacuo
15000	100 SA 8		3259.0"	1	0.91	8.7	30676
3257.916		1 3 9 5			9.9	,,	85.8
40.010	3256.92	2	56.9	ln l	,,,	,,	95.1
56.346	+	1		The state of	"	"	30700.6
56.194	11	2	75.0	1	"	"	02.0
	55.20	2	55·9 55·1	1	,,,	"	05· 11·4
54.542	PA.PA	4	54.4	4	- "	"	17.6
53.497	04.94	1	53.4	2	,,	"	27.4
99 491		-	52.0"	ln ln	"	8.8	42.
49.866	49.87	3	49.8	i	"		61.7
49.638	49.63	2	49.6	i	"	"	63.9
47.417		ī		1 200	"	"	84.9
46.951		0	46.9	1	"	"	89.3
46.431		2	46.3	1	"	39	94.2
45.510		0	45.4	ln l	,,	72	30803.0
45.022	45.02	1	45.0	1	"	,,	07.6
44.887		0		1 54-7	,,	,,	08.9
43.568		0	43.8	1	"	,,	21.4
42.734	42.78	1			,,	,,	29.1
42.462	42.47	1	42.4	1	,,	,,	32.9
42.132	1 1 1 1 1 1 1	1			,,	"	35.1
41.640	41.65	6	41.6	4	,,,	,,,	39.7
41.395	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	0	NET TO		,,	,,,	42.1
40.688	40.69	1	40.7	1	99	"	48.8
40.351	40.35	3	40.4	1	"	,,	52.2
D100000	Family R.	10000	39.5	lb	,,	95	60.
38.675	LINE STORY	0	38.5	1	"	"	67.1
38.414	100	1	000	. 9	22	"	70.5
38.003	1	0	37.9	1	"	"	74.4
05 115	a such		37.4	ln	99	,,,	80.
37.115		0	37.0	1	99	"	82.9
* 5	700		36.1	1	99	"	93.
95.597	15 TO 10 TO	0	35.7	1	"	"	98.0
35.537		0	35.3	1	"	"	99.6
35.370		0	34.5	i	"	"	30908
			33.0	i	"	"	22.
32.618	41-4-26	0	32.8	1	"	"	25.9
32.342		1	020	The state of the s	99	"	28.5
32.145	32.14	4n	32.0	4	"	"	30.4
E-si			31.7	ln	"	22	35.
g-Morale T		248.00	31.2	i	"	"	39.
30.903	30.90	4	THE PLANTERS		"	"	42.3
100	The second		30.7	2	,,	,,	44.
29.412	29.40	5	29.3	4	,,	,,	56.6
28.672	The same	0	28.6	2	"	,,	63.7
27.675	200	0	27.8	1	"	,,	73.2
	Service Control	PARTIES.	27.0	1	,,	"	80.
26.840	26.83	2	26.7	1	"	,,	81.3
	30 Sec. 40	2 2 3	25.8	1	,,	"	91.
	- 4		25.5	1	"	,,	94.
24.637	THE THE	0	24.5	1	"	"	31002.4
24 016	24.06"	ln		1	>>	,,	08.2

IRIDIUM-continued.

-	Aı	c Spectrum		Spark Spe	etrum	Reduct		
-	Wave-l	ength	Intensity	Wave-length	Intensity	Vacı	um	Oscillation Frequency
	Kayser	Exner and Haschek	and Character	Exner and Haschek	and Character	λ+	$\frac{1}{\lambda}$	in Vacuo
-	3223.645	3223.65	1	3223.6	1	0.91	8.8	31012.0
-	23.138		0	23.0	1	,,	,,,	16.9
-	22.854		0			,,	- ,,	19.6
1	22.600		1	22.5	4	"	99	22.0
-	01 415	01.40		22.4	2	"	,,	24.
	21.415	21.40	4	21.3	6	0.90	39	33.5
	20.924	20·91 19·66	10	20.7	2		"	38.2
	18.593	18.60	4	19·6 18·6	1	"	"	50·4 60·6
	17.700	17.70	1	10.0		>>	"	69.3
	17.301	1110	0	17:3	In	99	"	73.2
1	16.905		1			"	"	77.0
	16.431		Õ	16.5	1	"	8.9	81.5
			Page 1	15.2	1	"	,,	93.
1				14.3	1	,,	. ,,	31102
				14.0	1	"	"	05.
	13.681	13.68	3	13.6	1	1,,	,,	08.1
				13.2-	1	,,	"	13.
	12.629		0			,,	,,	18.2
	12.350	12.37	4	12.1	8	,,	,,	20.8
	12.240	12.22	4			,,	21	22.1
				11.5	1	,,,	,,	29.
	10 101			11.4	1	,,	"	30.
	10.131		2	00.0		"	99 .	42.5
				09.9	1 1	"	. ,,	45.
	09.050		0	09.6	1	29	"	48· 53·0
	08.287	08.27	2	08.1]	"	99	60.5
	00 201	07.22	i	07.0	i	"	59	70.8
		01 22		06.3	i	,,	"	80.
8	05.837		0	05.7	î	"	"	84.2
	05.227	05.22	3	05.1	î	"	"	90.2
	04.587		2	04.5	i	"	,,	96.4
	04.230		0	a called an all the	E STORE S	22	1,	99.8
				03.2	1	99	,,,	31210
			Barrier St	02.7	1	,,	,,	15.
	02.250		0			,,,	. ,,	19.1
	02.023		0			99	"	21.3
		ENTER DE DIE		01.8	1	,,	,,	24.
	01.027	01.02	2	01.0	1	,,	"	31.1
	00.166	00.16	ln	00.1	1	,,	,,,	39.5
	3199.058	3199.06	5	3199.0	2	,,	"	50.3
	98.226	98.23	1	98.1	1	,,	,,	58 4
	95.882		0	97·5 95·7	1 1	99	,,	65· 81·4
	99.882		U	94.2	1	"	"	98.
	93.345		2	54 L	1	"	"	31306.2
	93.240		1	93.2	1	"	"	07.3
	00 210		200	90.0	1	"	"	33.
	TO SEE			90.2	In	"	"	37.
	89.486	89.47	1	89.4	i	"	"	14.2
	88.702		i	88.7	î	"	"	51.8
	88.487		0			"	,,	53.9
	87.267		0	87.3	1			65.9

IRIDIUM—continued.

Aı	rc Spectrum		Spark Spe	ectrum	Reduct			
Wave-	length	Intensity	Wave-length	Intensity	Vacu	ium	Oscillation Frequency	
Kayser	Exner and Haschek	and Character	Exner and Haschek	and Character	λ+	$\frac{1}{\lambda}$	in Vacuo	
3186-667	THE STREET	1	3186.8	1	0.90	8.9	31371.8	
86.184		0		1 2 3	,,	,,,	76.6	
86.030		0			"	"	78.1	
		1000	85.7	1	,,	"	81.	
			85.4	1	"	"	84.	
	A.M. S.M.		84.8	1	"	"	90.	
00.004			83.7	ln	"	"	31401	
82.924		1	82.8	ln.	"	22	08·7 10·	
82.514	1000000	0	02.0	. In	"	22	12.8	
02 314		0	82.0	ln	"	"	18.	
			81.4	1	0.89	"	24.	
80.487	3180.48	4	80.4	i		9.0	32.8	
79.328	79.32	3	. 79.2	ln	"		44.2	
79.811	78.80	1	78.7	i	"	"	49.4	
		A THE	78.4	i	"	",	53.	
77.712	77.70	4	77.6	1	,,	,,	60.2	
77.325		0	- 77.2	1	,,	"	64.0	
			76.7	1	,,	,,	70.	
76.106		0	76.0	1	,,	,,	76.1	
		A CHANGE	75.3	ln ln	,,,	,,	84.	
			74.8	1	,,,	,,	89.	
73.466		3	73.3	1	,,	,,,	31502.3	
73.222		0		Two sees to	,,	"	04.7	
72.915	72.91	3	72.9	1	,,,	,,,	07.8	
71.812	71.80	2	71.7	1	,,	"	18.8	
	100000000000000000000000000000000000000		71.5	1	- "	99.	22.	
		- Shalle	71.3	1	"	"	24.	
	20.01		70.0	1	99	"	37.	
69.010	69.01	6	69.2	4	"	"	46.6	
68.673	1000	0	68.4	2	"	"	52.6	
68.404	68.30	4	00.4	2	"	22	53.7	
68.297 67.792	00.30	0			"	"	58.7	
67.328	67.30	3	67:3	1	"	,,	63.5	
66.886	66.85	i	66.8	i	. "	"	67.9	
00 000	, 00 00		66.3	În	"	,,	74	
65.833		1		The second	,,	"	78.3	
65.323		î	65.3	1	"	,,	83.4	
64.376		0.	64.1	2	,,	,,	92.8	
63.972	- MINE	1			"	,,	96.8	
62.953		0	63.0	1	"	"	31607.0	
62.871		0			"	"	07.8	
62.445		0	62.5	1	"	,,	12.1	
61.948	61.95	2	61.9	1	"	"	17.	
61.477	61.49	2	61.4	1	"	"	21.	
59.992	FO. C.1	1 2	60.1	1	"	"	36.0	
59.644	59.64	2 4	59.6	1 1	"	"	40	
59.280	59.29	4	59.2	1	,,,	"	50	
57.090		0	58.6	1	"	"	58.	
57·836 57·614	57.60	2	57.6	1	"	"	60.	
07.014	91.00	2	57.1	1	99.	"	66.	
56.274	56.28	2	56.3	1	"	"	73.9	

IRIDIUM—continued.

Ar	c Spectrum		Spark Spe	ctrum	Reduc		
Wave-l	ength	Intensity	Wave-length	Intensity	Vac	uum	Oscillation
Kayser	Exner and Haschek	and Character	Exner and Haschek	and Character	λ+	$\frac{1}{\lambda}$	in Vacuo
			3155-2	In	0.89	9.0	31685
3154.874	3154.85	3	54.8	2	,,	,,	88.1
54.679	54.66	3	54.7	1	"	"	90.0
		750/35	52.7	1	,,	,,	31710
51.748	51.75	ln	51.7	ln	"	"	19.4
50.727	50.76	4	50.7	1	"	,,,	29.6
50.128		0	40.0		"	"	35.7
	the second		49·6 49·0	1 1	"	"	41.
48.346	Part College	0	49.0	1	"	"	53.7
40.940		0	48.1	1	"	"	56.
47.860	47.85	1	47.9	î	"	"	58.7
41 000	41 00		46.9	î	"	9.1	68.
			46.6	1	,,	,,	71.
		9-3-1	45.7	ln	,,	"	80.
	45.17	3	45.2	2	,,	,,,	85.7
		S. Leave	44.5	1	,,	,,	93.
		CHILDREN.	44.4	1	,,	,,	94.
		7	44.0	1	,,	,,	98.
43.668		0			"	99	31800.9
42.994		0			"	"	07.7
42.371		1	SERVICE AND ADDRESS OF THE PARTY OF THE PART	是一	"	,,	14.0
47.040			41.0	0	0.00	,,	18·3 26·
41.946	10.50	1 3	41.2	2	0.88	"	32.8
90.704	40.52	1	40.4	1	"	"	41.1
39.704	39.70	1	38.6	In	99	"	52.
			37.8	6	"	"	60.
36.418	36.56	l 1n	310	, ·	"	"	73.7
00 110	0000		35.5	ln .	"	"	84.
35.358		0			"	,,	85.2
			35.0	ln	,,	"	89.
			34.2	1	,,	,,,	97-
	33.89	1	Statiful Se	1	22	,,,	31900.1
33.432	33.45	8 nr	33.4	6	"	,,,	04.7
33.210	33.23	3	00.5		"	"	07.0
		FREE TO	32.7	1	. ,,-	"	12.
	47th = =	BALL SER	32.3	1 1	"	"	16.
	HARRY E.	TA THE	29·9 29·7	1	"	"	43.
		10000	29.3	1	"	"	47.
28.510	28.51	3	28.6	2	"	"	55.0
20 010	20 01		26.9	ī	"	"	72.
		A LANGE	25.0	î	"	,,	91.
24.203	24.20	1	24.3	1	,,	,,,	99.1
24.024		0	100	N. S. C.	,,	,,	32000.9
23.334		2		100	,,	"	08.0
	22.82	1	22.6	2	,,	,,,	13.2
22.509	22.50	3	THE STATE OF		,,	,,	16.5
21.894	21.91	4	22.1	4	"	,,,	22.7
20.885	20.90	5	20.9	2	"	"	33.0
	Name of the last	1	20.5	1	"	99	37.
		0	19.8	1	"	"	44.

IRIDIUM-continued.

A	rc Spectrum		Spark Sp	ectrum		tion to	
Wave	length	Intensity	Wave-length	Intensity	Vac	uum	Oscillation Frequency
Kayser	Exner and Haschek	and Character	Exner and Haschek	and Character	λ+	$\frac{1}{\lambda}$	in Vacuo
3118-967	The state of the	1	3118-9	2	0.88	9.1	32052.8
17.968	0117.04	0		1	. ,,	,,	63.1
17.645	3117.64	1	177.4	2	,,	"	66.4
			17·4 16·3	1	"	"	69· 80·
14.669	14.69	3	14.6	1	22	, ,,	96.9
14.170	14.16	3 Pd ?	14.2	Î	,,	9.2	32101.1
13.908	A BUILDING	1	SAME		"	,,	04.9
13.229	R MAN IN THE	1			"	",	12.1
12.475	12.48	2	12.5	1	"	"	19.5
		The state of	12.2	1	,,	"	23.
	I Same		10.4	1	,,	39	41.
	09.49	1	10.0	1	,,	"	45.
08-670	08.67	1	09·5 08·7	1 1	"	- "	50·4 58·9
00 010	00 01	-	08.2	1	• • • •	"	64.
			07:7	1	"	"	69.
		DE BUILD	07.3	î	"	"	73.
			06.8	1	"	"	78.
06.072		0	06.2	1	"	,,	85.8
		STATE OF	05.3	1	"	,,	94.
04.301		0	04.3	1	"	,,	32204.2
03.875	03.88	1	03.9	1	,,	,,	08.6
0. 200	0. 00		02.8	ln l	,,	,,	20.
01.288	01.29	2 8	01.3	1	0.87	,,	35.5
00.586	00.50	0	3099.9	6	"	"	43.2
			99.6	1 1	"	"	50· 53·
			99.2	i	,,	"	57.
3099.055	3099.05	ln l			"	"	58.7
			98.7	1	"	"	62.
98.555		0			"	"	63.9
		B. T. B.	98.4	1	"	,,	66.
97.931	97.94	2	97.9	1	,,	,,	70.4
	04.40		95.4	1	,,	,,	97.
04.900	94.49	1	94.6	1	,,	17	32306.3
94·326 94·144	94.14	2	94·3 94·1	l ln	"	"	08.0
01 144	94.14		93.5	1n	"	"	17.
	CHARLED ON SHE		93.1	i	"	"	21.
	Burns h	- 6, 19	92.8	1.	"	"	24.
			92.5	1	"	27	27.
	The state of		91.6	ln l	,,	,,	37.
91.254	EALS VILLE	0		BEFE	29	,,	40.1
90.871	00.00	0	60.1		,,	"	44.1
90.277	90.29	2 0	90.1	I	"	"	50.3
89.660	88.15	5	88.2	6	"	"	56·8 52·6
88.163	99.19	0	88·2 87·7	1	>>	"	77.
			87.3	1	"	"	82.
86.564	86.58	4	86.5	2	"	"	89.2
00 301	0000	18 800	86.0	ln	"	"	95.
			85.3	1	"	"	32403
85.088		1			,,	,,	04.8

IRIDIUM—continued.

Ar	c Spectrum		Spark Spe	ctrum	Reduc	tion to	
Wave-l	ength	Intensity	Wave-length	Intensity	Vac	uum	Oscillation Frequency
	77 . 1	and	Exner and	and	-	1	in Vacuo
Kayser	Exner and Haschek	Character	Haschek	Character	λ+	$\frac{1}{\lambda}$	
3083.343	3083:37	4	3083.3	4	0.87	9.3	32422.9
83.085	00000	Î	83.0	4	,,	"	25.7
82.823		0			"	,,	28.4
10 E 10 C		0	82.2	ln	,,	"	35.
81.709		1	81.6	ln ln	,,	11	40.2
			81.0	ln	"	,,	48.
	PINE IN		80.2	1	,,	,,	56.
79.892		0	79.9	1	"	"	59.4
78.793	HO HO	2			"	"	71.0
77.000	78.70	1			"	,,,	71.9
77.996	78.00	2	77.7	1	**	"	79·4 82·0
76.800	77·75 76·80	3	76.8	2	"	"	92.0
75.577	10.80	0	75.6	2	22	99	32504.9
10 011			75.0	ī	"	, ,,	11.
74.864	74.87	2	.00	1	"	13	12.4
.1001	,10,		74.5	1	"	"	16.
73.800		0		HARRY IN	"	"	23.7
73.390	73.42	2	73.5	2	,,	"	27.9
72.904		0	72.7	1	,,	,,	33.2
		Halle ST	72.2	1	,,	,,	41.
72.078		0			,,	,,	42.0
		E E	71.7	1	,,	,,,	46.
			71.4	1	,,,	,,	49.
			70.5	. 1	99	1)	59.
69.825	69.82	3	69.9	1	99	,,	65.9
69.220	69.18	4	69·2 69·0	6	99	>>	72·5 74·6
69·005 68·507	69.00	5	68.6	1	"	"	79.8
00 001	THE REAL PROPERTY.	1	67.7	i	"	,,,	88.
			67.3	i	"	99	93.
66.760		0	66.5	ī	"	"	98.4
66.167		0			"	,,	32604.7
65.944	STATE OF ALL	0	65.7	1	,,	,,	07.1
65.292	65.27	1			,,	,,	14.0
64.904		3	64.9	8	,,	,,	18.1
64.622	64.65	2			,,,	"	21.0
64.216		0	64.3	1	"	,,,	25.5
02 222	0. 40		61.6	2	0.86	"	53.4
61.515	61.53	3	61.5	1	"	"	54.2
60.950	60.96	2	61.1	1	"	"	59· 60·2
60.460	90.96	0	60.1	1	"	"	65.5
60.114		1	001	-	"	"	69.2
59.858		1	59.9	1	"	"	71.9
00 000	THE BOWLES		58.8	î	"	"	83.
58.438		0	58.5	i	"	"	87.1
58.087	THE ROPE	0			"	"	90.8
B. Trans	STATE OF	Tele III	57.7	1	"	,,	95.0
57.590		2	E HITTER		"	,,	96.3
57.398	57.40	4			"	,,	98.2
	Carried State	Ly Elsen	57.3	1	,,	99	99.3
56.770	The state of the s	0			,,	,,	32705.0

IRIDIUM—continued.

Aı	cc Spectrum	13.22	Spark Spe	ectrum	Reduct		
Wave-	length	Intensity	Wave-length	Intensity	Vacu	um	Oscillation
Kayser	Exner and Haschek	and Character	Exner and Haschek	and Character	λ+	$\frac{1}{\lambda}$	in Vacuo
3054.570		1			0.86	9.3	32728.5
54.351		0	3054.2	1	,,	9.4	30.8
53.709	3053.70	2	53.7	ln	,,	,,	37.7
		19350	53.2	1	,,	"	43.
52.288	52.30	2	52.3	2	22	"	52.8
E1.049	E1.0E	1	51.5	1 1	"	"	61.
51.243	51.25	1	51·3 50·6	1	"	"	64.1
.50.134		1	50.5	1	"	"	76.
49.559	49.52	5	49.4	i	"	"	82.4
48.783	10 02	1	48.9	i	"	"	89.6
47.904		i	48.0	1n	"	"	32800.0
47.277	47.27	5	CONTRACT OF STREET	THE REL	"	33	06.8
45.768	STATE OF L	0	45.7	1	"	,,	23.8
			45.3	1	"	"	28.
44.255	ALE PROPERTY	0	THE PARTY OF THE P		"	"	39.4
43.671		0 .	43.6	1	,,	99	45.7
42.760		2 0	42.7	8	"	"	55·5 59·1
42.429		I	42.0	1	"	"	63.9
41.979		1	41.6	1	"	"	68.
41.056		1	41.0	1	"	"	73.9
41 000		1000	40.9	1	"	"	75.6
40.580	40.58	3	200		"	"	79.1
			40.0	1	"	"	85.
39.378	39.38	5	39.3	4	"	,,,	92.0
37.861	37.86	3	37.7	1	,,,	,,	32908.5
			37.2	1	"	,,	16.
36.361		0	36.5	1	"	"	25.8
04.077	94.00	2	35.0	1 1	"	"	40.
34.675	34.66	2	34·6 34·4	1	"	"	46.
			34.2	1	"	"	48.
33.744	33.75	2	33.7	î	"	"	53.1
00 113	30.0	1	33.0	î	"	"	61.
32.528	32.55	2	32.6	1	"	3,	66.3
30.568		0			"	"	87.7
30.365	1	1		A Bloom Be	,,	"	89.9
29.487	29.50	5	29.5	2	"	"	99.4
26.489	95.00	1 3	26.5	4	"	27	33032·2 37·6
	25.99	3	25.8	2	"	0 17	40.
		1 6 300	25.3	1	2)	9.5	45.
	DOM:		25.0	î	"	,,	48.
24.410		2	24.4	î	,,,	,,	54.8
			23.4	1	,,	"	66.
			23.2	1	,,	99	68.
22.807	22.81	2	22.7	1	0.85	"	72.3
22.536	22.54	2	22.5	ln	"	"	75.3
	E BUILDING		21.6	1	"	. ,,	86.
		1 36713	21.1	1	"	"	95.
20.125	20.12	3	20.1	1	"	"	33101.7
19.350	19.35	3	19.2	2	"	99	09.2

IRIDIUM-continued.

A	re Spectrum		Spark Spe	ectrum		tion to		
Wave-	length	Intensity	Wave-length	Intensity	Vac	uum	Oscillation Frequency in Vacuo	
Kayser	Exner and Haschek	and Character	Exner and Haschek	and Character	λ+	$\frac{1}{\lambda}$	in Vacuo	
3018·151 17·450	3017.43	2 4	3018·1 17·4	1n 1	0.85	9.5	33123·5 31·2	
16.550	16.55	3	16.8	1	,,	,,	36· 40·9	
10 000	1000		16.4	2	"	"	43.	
			15·8 15·1	1	"	,,	49· 57·	
14.854	1 5 5 7	1	14.9	1	"	99	59.6	
[14.585		1	14.6	1	,,	"	62.5	
	alla		14.3	1 1	"	"	66.	
12.984		1	13·2 13·0	1	"	"	78· 80·2	
12.695	12.71	2	130	-	"	"	83.3	
			12.4	1	"	"	87.	
11.812	11.84	3	11.7	1	,,	,,	92.9	
10.020	10.03	2	08.8	1	"	22	33212.8	
08.753		1	08.5	1	"	"	26·8 30·	
07.838		0	000	200	"	"	37.0	
07.745		0	07.7	2	"	,,	38.0	
		1000	06.5	1	"	,,	52.	
	a second law.	10 mg	06.3	1	"	"	54· 61·	
05.338	05.33	2	00 1		"	"	64.7	
			05.1	1	"	,,,	67.	
			04.7	1	,,	,,	72.	
04·429 03·761	03.78	0 4	03.7	1	, ,,	> >	74·7 82·0	
03.701	03.10	*	03.2	ln	"	"	88.	
02.375		1		124	"	"	97.5	
	1 th 1 th 1 th	Bi. A	02.0	2	"	"	33302	
01.909		0	01.6	1	"	,,	06.	
01.383		0	01.2	1	"	"	08.5	
		14/485	01.0	î	"	"	12.	
00.149	00.15	2	00.2	1	"	"	23.7	
0000 1 4 4			2999.7	1	"	"	27.	
2999;155		0	99·2 98·7	ln 1	"	,,	33.2	
			97.8	1	"	"	48.	
	2997.54	3	97.6	2	"	9.6	51.1	
97.314	97.31	2	97.4	1	"	,,	53.6	
96.785	96.20	0 4			"	"	59.5	
96.202	90-20	4	95.5	ln	"	"	66.0	
	Con Later	TO WELL	94.8	1	"	"	82.	
STATE OF THE RESERVE		1-4	94.7	1	"	"	83.	
93.751		0	93.8	1	"	"	93.3	
93.184	NE STEEL	2	93.5	l ln	,,,	"	96.	
99.104	·	-	91.9	ln ln	"	"	33414	
91.520		1	91.7	ln	,,	"	18.2	
90.746	90.77	3	90.7	1	,,	"	26.7	
	The same of the sa		90.1	1	99	1 ,,	34.	

IRIDIUM—continued.

A	rc Spectrum		Spark Spe	ectrum	Reduc	tion to	
Wave-	length	Intensity	Wave-length	Intensity		uum	Oscillation Frequency
Kayser	Exner and Haschek	and Character	Exner and Haschek	and Character	λ+	1_ \(\lambda\)	in Vacuo
			2989.6	1	0.85	9.6	33440
2988:335	o specime	0	87.6	1	"	"	53·8 62·
			86.7	1	99 99	"	72.
85.921	2985.94	3	85.9	1	"	"	80.8
		Mary II	83.8	1	,,	,,	33505
82.962		0	83·7 82·9	1 Fe ?	0.84	"	06· 14·1
. 04.902		0	82.7	1		"	17.
	82.55	1	82.5	i	"	"	18.8
	The Case of the Case	2	81.8	1	"	,,	27.
81.042	00.00	2			"	"	35.7
80·776 80·578	80.80	4 0			**	39	38·6 40·9
80.375	B SHIP PAR	0		1	"	"	43.2
00010			80:0	1	"	- "	47.
		To the S	79.8	1	"	,,	50.
		1 1 1	79.2	1	,,	,,,	56.
			78.5	2	99	"	64.
78.056		2	78·2 78·0	1	. 22	"	68· 69·3
10 000	77.80	1	77.6	1	"	"	72.2
			77.3	i	"	"	78.
76.857		0			,,	"	82.9
	BELLEVE !	B LILEY	76.4	1	,,	"	88.
75.062		4	75.6	ln	"	"	97· 33603·1
75.002	75.07	3	75.1	2	"	,,	03.0
74.659	74.66	1	74.6	1	"	"	07.7
74.220	74.24	2	74.3	1	,,	,,	12.5
			74.2	1	"	"	13.
72.646		0	73.7	1 1n	"	"	19.
71.205	71.20	0 2	72·5 71·6	2	"	, ,,	30·4 46·8
11 200	11 20		69.7	1	"	9.7	64.
	69.07	1	69.2	1	,,	,,	71.6
20.00	68.60	1	68.7	1n	"	,,	76.2
68.334	68.32	2	68.4	1	,,	,,	79.3
67:360		0	67·8 67·4	ln I	"	"	90.3
0, 500			67.1	i	"	"	93.
66.245	66.24	2	66.3	1	,,	,,	33703.0
			65.7	1	"	,,	09.
65.329	65.34	3	65.4	1	,,	"	13.3
65.095		0	64.3	2	"	"	25.
63.111	63.11	3	63.2	2	"	"	38.6
		11157	63.1	1	,,	"	39.
	100	BAR B	62.7	1	,,	,,	43.
62.580		1	61.0		,,	"	44.7
61.595	61.59	2	61·8 61·7	1	"	"	54· 55·9
61.009	61.03	i	61.2	i	"	"	62.4
		134 44	60.3	2	"	,,	70.

IRIDIUM—continued.

Intensity and Character Exner and Haschek Character \(\lambda + \lambda \) \(\lamb			Reducti	etrum	Spark Spe		c Spectrum	Aı
Kayser Exner and Haschek Character Character Exner and Haschek Character Character λ + 1 / λ - 2959·573 0 2959·2 1 0.84 9·7 59·049 0 56·60 1 """"""""""""""""""""""""""""""""""""	Oscillation Frequence	m	Vacu	Intensity	Wave-length	Intensity	ength	Wave-
59-049 0 2959-2 1 " " " " " " " " " " " " " " " " " " "	in Vacuo	1 \(\lambda\)	λ+	and		and		Kayser
59-049 0 2959-2 1 " " " " " " " " " " " " " " " " " " "	33778.9	0.7	0.84		The same of the sa	0		2959.573
59-049 0 56-69 0 56-7 1 """"""""""""""""""""""""""""""""""""	83.	100		1	2959-2			200000
56·699 0 56·7 1 """ <td>84.9</td> <td></td> <td>The state of the s</td> <td></td> <td></td> <td>0</td> <td></td> <td>59.049</td>	84.9		The state of the s			0		59.049
54·909 1 55·5 1n "	33811.8			1	56.7	0		56.699
54·909 1 55·5 ln "	20.		0000000	1	56.0			
53:205 0 54:9 4 "	26.			ln	55.5			
53:205 0 54·6 1 Fe? " 51:363 2951:35 8 51·3 4 " " 51:266 2 50·883 50·89 2 "	32.3		The state of the s	-				
51·363 2951·35 8 51·3 4 "	52.		"					
51-266 50-883 50-89 2 50-606 50-61 1 50-6 1 """"""""""""""""""""""""""""""""""""	57.8	,,	,,				2027 22	
50·883 50·606 50·61 1 50·6 1 """"""""""""""""""""""""""""""""""""	72.9	,,	"	4	51.3		2951.35	
50·606 50·61 1 50·6 1 """"""""""""""""""""""""""""""""""""	74.1	>>	"				50.00	
49·882 49·89 3 49·8 1 """"""""""""""""""""""""""""""""""""	78.4	,,	,,	200	70.0			
49·882 49·89 3 49·8 1 """"""""""""""""""""""""""""""""""""	81.6	"	"			1	90.01	90.000
47·093	84· 89·7	.99				2	10.80	40.889
47·093 47·48 dr.10 1 dr.1 dr.1 2 dr.1 dr.1 dr.1 dr.1 dr.1 dr.1 dr.1 dr.1	33906	25000				0	40 00	40 002
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	17.6		10000	111	400	1	47.48	
43·287 43·30 8 45·7 1 " <	22.0	The State of		9	47.1			47.093
43·287 43·30 8 44·0 1 ", 9'8 41·197 41·20 2 41·2 1 0'83 " 40·669 40·66 3 40·7 2 " " 40·548 0 39·390 39·40 3 39·4 4 " " 38·877 38·87 1 39·2 1 " " " 38·606 38·60 3 39·2 1 " " " 37·371 0 37·3 1 "	38.						11.10	
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	58.	0.8						
41·197 41·20 2 41·2 1 0°83 " 40·669 40·66 3 40·7 2 " " " 40·548 0 39·390 39·40 3 39·4 4 " " " 38·877 38·87 1 39·2 1 " " " 38·606 38·60 3 " <td>65.4</td> <td></td> <td>"</td> <td></td> <td></td> <td>8</td> <td>43:30</td> <td>43.287</td>	65.4		"			8	43:30	43.287
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	72.		0.83					
40·669 40·66 3 40·7 2 """ """ """ """ """ """ """ """ """ ""	90.0	-				2	41.20	41.197
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	96.1					3	40.66	40.669
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	97.5					0		40.548
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	34010.8			4	39.4	3	39.40	39.390
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	13.			1	39.2			
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	16.8							
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	19.9		,,				38.60	
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	25.2	,,	,,					
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$. 30.9	,,	,,					
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	34.2	,,	"				00.05	
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	40.5	,,	,,					30.814
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	47.8	"	"	1	36.2		36.20	25.407
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	56.8	"	"		050	Comment of the Commen	25.20	
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	58·2 64·6	39	"					
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	82.1	"						
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	88.						00 20	00 202
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	94.		1000			0		
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	98.7			263	022			31.821
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	34111.2			1	30.7		30.75	
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	16.4		the second			1	30.30	30.298
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	22.			4	29.8	19 18 23		
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	45.1			Na 26 -		0		27.833
$egin{array}{c c c c c c c c c c c c c c c c c c c $	47.			1		PO. 120.		P West
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	53.3	0.000				1	27.14	27.129
	58.							
000	64.1					0		26.212
	76.	"	"	4	25.2			01.010
24.912 24.94 10 24.9 4 ,, ,,	79.1		,,			10	24.94	24.912
24.0 1 ,, ,,	90.	,,	99			0		01 007
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	34222·2 26·	3.9	"			0		21.237

IRIDUIM—continued.

		Reduct	etrum	Spark Spe		c Spectrum	Aı
Oscillation	aum	V alc	Intensity	Wave-length	Intensity	length	Wave-l
in Vacuo	$\frac{1}{\lambda}$	λ+	and Character	Exner and Haschek	and Character	Exner and Haschek	Kayser
34238	9.9	0.83	1	2919-9			CARRES .
44.9	"	"	4	19.3	0		2919-299
52.1	"	,,	4	18.7	3	2918.69	18.683
59.	"	"	1	18.1			
61·6 74·	"	"	1	17.9	1	17.86	17.885
78.0	"	"	4	16·8 16·4	4	16.49	16.479
86.1	"	"	1	15.7	0	10.49	15.793
88.1	"	"		19.1	0		15.625
34306	"	"	2	14.1	0		10.020
08.	"	"	1	13.9			
111.	"	"	î	13.7			
12.0	"	"		10	0		13.592
26.5	"	"	1	12.4	1 Pt?	12.36	10 002
38.	"	,,	ī	11.4			
46.	,,	,,	1n	10.7			
55.4	,,	"			0		09.912
58.3	,,	,,	1	09.6	2	09.66	09.669
68.	,,	,,	1	08.8			25 - 3119
73.	"	"	1	08.4			Maria
81.	,,	99	1n	07.7			
85.6	,,	,,	1	07.3	3	07:36	07:353
96.	,,	"	ln	06.5			
34402	"	"	1	06.0			
04·5 14·5	"	"	1	05.7	2	05.75	05.774
25.4	99	"	1	04.9	4	04.93	04.913
27.1	"	0.82	1n	03.7	0		03.995
32.	"			03.4	0		03.852
44.1	"	"	1n	03.4	0		02.430
48.0	"	"	1	01.9	3	02.09	02.430
59.	"	99	1	01.3	9	02.09	
68.0	"	"	1	00.4	1	00.50	00.492
70.9	"	"		00 1	0	00 00	00.165
76.0	"	"	1	2899.6	2	2899.74	2899.733
84.1	,,	"	9.00	2000 0	0	2000 11	99.055
91.2	,,	"	1n	98.5	2		98.455
97.	22	"	1	98.0			00 100
99.2	22	,,			0		97.783
34505.4	,,	22	2	97.1	5	97.27	97.260
07.6	10.0	,,			1	97.07	7780 1
23.9	"	"	1	95.7	0		95.705
39.6	,,	,,,			0		94.388
44.2	,,	"	1	94.0			Marie St.
46.8	"	"	73 8	-	0	100	93.785
63.7	"	"	1	92.3	1		92.371
72.	"	"	1	91.7			00.001
84·5 95·8	,,	,,	-	00 -	0		90.634
34612	"	,,	1	89.7	1		89.688
25.1	"	"	1	88.3	0		07.040
29.1	"	"	1	00.0	2	100	87.240
44.7	"	"	1	86.9	0		85.615
	99	99					

IRIDIUM--continued.

	Ar	c Spectrum		Spark Spe	ectrum	Reduc		
7	Wave-l	ength	Intensity	Wave-length	Intensity		uum	Oscillation Frequency in Vacuo
	Kayser	Exner and Haschek	and Character	Exner and Haschek	and Character	λ+	$\frac{1}{\lambda}$	in Vacuo
				2884.7	1	0.82	10.0	34656
0	009.540	0000.77		84.2	1	,,	,,,	62.
2	883·549 82·970	2883.55	1 0	83.5	1	"	"	69·5 76·
	82.742	82.77	5	82.6	1	"	99	79.0
	02,12	02		82.2	î	"	, ,,	86.
			100	81.7	1	"	,,	92.
	81.270	81.30	2	81.1	1	"	,,	96.7
	80.324	80.29	1	80.2	1	,,	"	34708.5
	80.174		0	80.1	1	"	"	10.1
	79.878	70.71	0	79.5		"	"	13.7
	79·515 78·632	79.51	3 2	79.5	l In	"	99	18.1
	77.781	77.79	4	77.7	1	"	"	28·7 38·9
	77.108	1110	0	77.1	1	"	"	47.1
	76.096	76.10	4	76-1	2	"	"	59.3
	75.721	75.72	4	75.7	2	,,	"	63.9
		75.10	1		1000	,,	,,	71.4
	73.929		0	73.8	1	"	,,	85.6
	70.007	73.46	2	73.4	1	"	_ 99	91.2
	72.227		0	71.9	1	"	"	348062
			100	71.7	1	"	37	10.
				71.2	1	"	"	19.
				71.1	î	,,	"	20.
	70.698		0			"	"	24.8
	70.304		0	70.2	In	,,	"	29.5
	69.815	69.80	2		-	"	"	35.5
				69.6	1	19	10.1	38.
	21/2 3/	68.70	1	07.0		"	10.1	48.9
	66.798	66.76	3	67·8 66·7	1 1	"	"	60.
	00.199	00.70	3	65.6	1	"	"	72·3 87·
	63.955	63.95	3	00 0	-	0.81	"	34906.7
	00 000	00 00		62.8	1	"	"	21.
	13/5	62.60	1	62.6	I	,,	"	23.2
	62.455	62.49	1n			"	"	24.7
				61.0	ln	,,	"	43.
	60.767	60.77	2	60.7	1	"	,,,	45.5
	60.126		0	60.4	1	"	"	50.
	00.120		U	60.0	1	"	"	53·4 55·
	543 E			59.4	i	"	"	62.
	59.138		0	Establish and the		"	"	65.5
				58.9	1	"	"	68.
				58.5	1 Fe ?	"	"	73.
	57.058	57.05	1	57.0	1	,,	22	91.0
	56.048	56.03	1	56.1	ln	"	"	35003.4
	55.931	55.96	1	55.7	1	"	,,	04.6
	E 10 12 1			55.5	1 1	"	,,	08.
	54.722		0	00.0	1	99	"	19.6
	53.416	53.43	1	53.5	1	"	"	35.5
	52.605		Ō	52.6	1	"	"	45.6

IRIDIUM—continued.

A	rc Spectrum		Spark Spe	ectrum		tion to	
Wave-	length	Intensity	Wave-length	Intensity	Vac	uum	Oscillation
Kayser	Exner and Haschek	and Character	Exper and Haschek	and Character	λ+	$\frac{1}{\lambda}$	in Vacuo
ARTER T			2852.3	1	0.81	10.1	35049
2851.648	2851.65	ln	51.6	1	**	,,	57.3
51.518	51.56	ln			,,	,,	58.7
51.161	-	0	50.8	1	"	,,	63.3
50.906	THE RESERVE TO SERVE	0			,,	,, 10	66.5
		10 SETTE	50.5	ln	"	,,	81.
49.848	49.86	8	49.7	6	,,	,,	79.4
49:557	THE WAY	0			,,	,,	83.1
48.557	-	0	48.4	1	,,		95.4
46.753	The second	0	46.8	1	,,	10.2	35117.5
	Part Libert		46.5	1	,,	,,	21.
	4	1 1 1 2 2	46.3	1	,,	,,	23.
45.245		1			,,	,,	36.0
45.009		0	44.6	1	,,	,,	39.2
42.390	42.40	2			,,	,,	71.4
			42.1	1	***	,,	75.
41.798	41.80	1		Te Tie Li	,,	,,	78.8
			41.6	1	,,	,,	81.
40.332	40.35	4		1	,,	,,	96.8
	THE STREET		40.2	4	,,,	,,	99.
39.287	39.32	6			,,	,,	35209.7
			39.2	4	"	,,	11.
	TRANSPORT		38.3	ln	,,	,,	.21.
37.421	37.42	3		1 5 7 8 3	,,,	,,,	33.1
			37.2	2	,,,	,,	36.
36.506	36.51	4			,,	,,	44.4
36.197	36.21	1	L. E. B.	3/16/3	,,	,,	48.2
35.762	35.75	3	35.7	1	,,	99	53.8
35.408	COR TOWNEY				,,	,,,	58.1
	THE DAY	0	34.2	1	99	99	73.1
33.777	1971	0			99	"	78.4
33.337	33.35	3	33.2	8	,,,	,,	83.8
32.874		2	32.6	1	,,,	- 99	89.6
31.912	31.93	1	31.8	1	,,	,,,	35301.5
31.455	31.46	1	472	-	"	,,	07.3
30.964		PARENT BE		000	22	"	13.4
30.601	30.57	2	30.4	ln	"	"	18.2
30.264		3	200		"	,,	21.2
29.720	29.73	1	29.8	1	"	,,,	28.9
27.259	27.27	1	27.2	1	,,	"	59.7
26.316	THE SECOND	0	26.3	ln	"	99	71.6
	AND DESCRIPTION OF		25.7	1	"	"	79.
	The state of		25.5	1	"	"	82.
24.546	24.59	6	24.4	2	0.80	"	93.4
24.228	FOR STREET	1	00 =	1 3	"	"	97.7
23.831	14	0	23.7	1	"	100	35402.7
23.280	23.34	4	23.3	1	"	10.3	09.1
20.738	OF STREET	2	20.6	1	"	,,,	41.4
20.614	1 2 2 4	0	100		"	"	43.0
19.848	IN RI LA	0	19.8	ln	"	,,	52.4
	US DESCRIPTION	13.34	19.3	1	,,	"	60.
State of the state	The second		17.6	1	,,	"	81.
17.284	187 13 E	0	1000	The state of the s	"	"	84.9
17.039	17.04	1	17.0	1	99	22	88.4

IRIDIUM-continued.

Aı	c Spectrum		Spark Spe	ctrum	Reduct	tion to	
Wave-l	ength	Intensity	Wave-length	Intensity	Vacı	uum	Oscillation
Kayser	Exner and Haschek	and Character	Exner and Haschek	and Character	λ+	$\frac{1}{\lambda}$	in Vacuo
2816-409		0	2816.5	1	0.80	10.3	35495.9
15.744		0	15.9	î	,,	,,	35504.3
74.000			15.5	In	,,	99	07-
14·966 14·532	2815.00	1	15.0	1	99	,,	14.1
14.004	14.52	1	14·5 14·1	1	"	"	19.8
		8.41.33	13.6	1	"	"	26· 31·
		18-11-6	13.3	1	"	"	35.
12.896	12.91	2	12.7	î	"	"	40.2
			12.0	2	,,	"	52.
		1000	11.4	1	"	,,	. 59.
10.055	70.05		11.3	ln	,,	,,	60.
10.657	10.65	1	10.5	1	,,,	,,	68.6
08.249		0	08.7	1	,,	"	93.
07.754	07.75	1	08·1 07·6	1 1	"	"	99·1 35605·4
06.772	0,10	0	0,0	1	"	"	17.8
06.479	06.50	1	06.3	1b	"	"	21.4
		The same	05.8	1b	"	"	30.
04.300		0	04.6	2	"	,,	49.2
			03.2	1	,,	,,	63.
			02.7	2	,,,	,,	70-
HET TOO			01.9	1	"	,,	80.
		Parlace at	01·5 01·1	1	"	,,	85.
00.923	00.91	3	01.1	1	"	,,	90· 92·3
00.755		1	00.6	. 4	"	"	94.4
2799.835	2799.84	2	2799.6	î	"	"	35706.1
99.522	Mark Street	0			"	10.4	10.0
			99.3	1	"	,,	13.
98.283	00.00		98.7	ln	29	"	20.
96.799	98·29 97·82	4	98.1	2	29	"	25.7
97.456	97.45	5 4	97·6 97·3	2n 2	"	,,	31.7
96.558	96.55	2	96.3	1	"	,,,	36·5 47·9
	0000		95.7	ln	"	"	59.
		200	95.4	2	"	"	63.
94.189	94.20	1		1773	"	"	78.1
93.907		0	93.6	2n	,,	,,	85.7
			92.2	1	"	,,	35804
90.795			91.4	1n	,,,	"	14.
90.199		0	90.6	1	,,,	,,	21.7
			90·2 89·7	1	"	"	29· 36·
			89.4	ln ln	"	99	40:
89.066		0	89.1	1	"	"	43.9
Marie I			88.5	ln l	"	"	51.
87.687		0	87.8	1	"	"	61.6
07 000		THE ROLL	87.4	1	,,	,,	65.
87.099		1			,,	,,	69.2
		1	86.3	I	"	,,	79.
			85·9 85·6	1	"	"	85.
85.319	85.33	3	99.0	1	,,	,,	89· 92·1

50 IRIDIUM—continued.

Wave-length Intensity and Character Exner and Haschek Exne	Ar	rc Spectrum		Spark Spe	ectrum	Reduc	tion to	
Exner and Haschek Character Haschek Character A +	Wave-l	ength	Intensity	Wave-length	Intensity	Vacu	ıum	
2783.797 83:492 0 83-5 1 0.70 , 35911-8 15.7 82:885 0 83:1 1 , , , , , , , , , , , , , , , , , , ,	Kayser		and		and	λ+		
83:492 0 83:5 1 " 15:7 82:885 0 82:5 1n " 21:0 82:342 0 81:7 1 " 30:5 81:401 2781:42 4 81:3 2 " 42:6 81:07 81:07 1 81:0 1 " 47:1 80:507 80:55 1 79:3 1 " 47:4 80:507 80:55 1 79:3 1 " 79:4 79:752 1 79:3 1 " 90:9				2785-2	1		10.4	
82-885 0 83·1 1 " 21·35 82-342 0 82·5 1n " 30·5 81-401 2781-42 4 81·3 2 " 42·6 81-07 1 81·0 1 " 47·1 80-507 80·55 1 79·3 1 " 54·0 79·752 1 79·3 1 " 79·3 1 77·645 77·645 1 79·3 1 " 79·3 77·645 77·55 2 77·4 1 " 79·3 77·645 77·55 2 77·4 1 " 79·3 77·645 77·50 1 70·3 1 " 79·3 77·645 77·55 2 77·4 1 " 97·7 77·645 77·50 1 74·9 6 10·5 24·5 75·073 75·90 1 74·9 6 10·5 24·5 75·073 75·90 1 74·9 6 10·5 24·5 72·547 72·58 3 72·5 2 " 77·1 70·5 2 " 73·5 1 " 79·3 1 " 79·3 1 " 79·3 1 " 79·3 1 " 79·3				22.5	1			
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	83.492		U					
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	82.885		0					
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$				82.5	1n			
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	82.342		0	0.1	154	,,	"	
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	07.407	0701.40	1 .			,,	"	
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$			-					
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$				01 0	1			
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$		00 00		79.3	1			
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$								
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$				76.0	1	,,	,,	
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$		88.55	0	77.4	P. Toron	"		
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$		77.55		11.4	1			
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	11-149		100	76.3	1			
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	75.646	75.65	3					
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$				74.9	6		10.5	
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	74.685					,,	,,	1
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$		74.05	1			,,	"	
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$								
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	79.547	79.59	3			1 - 0 - 1		
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$.20				
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$			139.68	69.6	1			96.
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$,,		
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$						"	,,	
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	05 504	07.70				,,		
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$				070	1	"	"	
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	07.425	0, 11		66.9	1	100		
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$		I was delta		66.3		1		39.
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$						1		
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	-					,,	"	
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	THE RELLEGIO						1	
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	THE STATE OF		1000					
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$			THE FARM				3 6670	
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	Bullion III	THE STATE OF STREET		63.5	1			76.
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	63.287	STATE OF THE PARTY	0			ALC: U		
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$,,	,,,	
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	01.500		0	62.1	In			
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$				61.3	. ln	THE LIBERT		
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$				010	111	1		
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$		- CHENNE	0	60.6	1			18.7
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$		60.00	2					
59·100 59·11 1n 58·8 1h ,, ,, 33·5								
58.8 1h ", ", 37.				59.4	1			
50.4 1 49:	59.100	59.11	In	58.8	16	1		
				58.4		,,	**	42

IRIDIUM-continued.

A	rc Spectrum		Spark Spe	ectrum	Reduc		
Wave-	length	Intensity	Wave-length	Intensity	Vacı	uum	Oscillation
Kayser	Exner and Haschek	and Character	Exner and Haschek	and Character	λ+	1_ \(\lambda\)	in Vacuo
2758.325	2758.33	2	0770.0	1	0.79	10.5	36243.4
			2758.2		,,	**	45.
	E - E TIME	COURT I	57.6	1	"	"	53.
FC 000	F0.00		56.6	1	99	,,,	66.
56.206	56.20	1	700		"	99	71.3
	The Little of th	The state of	56.0	1	"	,,,	74.
	Sillie Links	1 7 7 7 7	55.8	1	"	"	77.
	PAST RE	100	55.2	1	,,	59	85.
F0.054	The second second	0	54.6	1	"	"	92.
53.954	ELECTION STATE	0	53.8	2	"	"	36300.9
	BANGE A SHOULD		53.2	1	99	,,,	11.
			52.8	2	99	,,,	16.
	DE CHARLES		52.3	1	99	99	23.
			51.8		"	10.0	29.
	ALL DESIGNATION OF THE PARTY OF	FAS	50·8 50·0	1 1n	"	10.6	43.
	But But	15	49.3	1n	,,	"	53· 62·
49.075		0	49.9	1	,,,	,,,	65.3
49.019		U	48.8	1	"	,,	69.
48.395	BE BUT ST	0	48.3	1	,,	"	74.3
40.000	BATTE ST	U	48.0	1	"	"	80.
47.602	47.62	1	400	1	,,,	99	94.7
47.383	41 02	0		The state of	"	"	87.7
41 909			46.1	1	"	"	36405
	MILEVE BY BY	Carrier .	45.5	i	,,	"	13.
			45.2	· i	,,	•,	17.
		Selection.	44.5	î	"	"	26.
44.091	44.09	3	44.1	2	,,	,,	31.3
43.769		0	43.9	1	"	"	35.6
43.477	THE STATE OF	0	43.5	2		"	39.5
40.432		1			0.78	,,	80.0
40.267	40.22	1			**	"	82.5
40.166	40.16	1			,,	"	83.6
40.085	40.08	1		2 11	,,	22	84.7
39.413	39.39	1	39.4	2	,,	,,	93.7
			39.3	1	,,	9.9	95.
38.875		0	38.7	1	,,	99	36500.7
	1 5		38.4	1	,,	,,	07.
			37.6	In Rh?	99	,,,	18.
	37.38§	2	37.3	1	,,	"	20.7
	Bank Silver	-	36.8	1	,,,	,,,	28.
36.509		0			,,,	,,	32.3
			36.3	1	"	,,	35.
	35.78	ln	35.7	1	,,	,,	42.1
05 105		BANGE SOLIS	35.3	1	"	"	48.
35.165		1	97.0	1	,,	,,	50.3
04 200			35.0	ln	,,,	99	52.
34.596	THE PARTY OF	0	04.0	1	,,	"	58.1
	04.00"	-	34.3	1	,,,	,,	62.
	34.03	5	00.4	9	- 99	,,	
	34.03	5	33.4	2	"	"	65.4

[§] Occurs also in Pt. || Occurs also in Pt and Pd.

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IRIDIUM—continued.

Aı	e Spectrum		Spark Spe	etrum	Reduct		
Wave-	length	Intensity	Wave-length	Intensity	Vacu	lum	Oscillation Frequency
Kayser	Exner and Haschek	and Character	Exner and Haschek	and Character	λ+	$\frac{1}{\lambda}$	in Vacuo
2732.752	2732.75	2			0.78	10.6	36582.6
		1	2732.5	4	,,	,,	86· 93·2
31.954		0	31.2	1	"	"	36603
		19 3 19	31.1	1	99	"	05.
	30.79	2			"	"	08.8
30.500		0 .		Total III	"	,,	12.7
29.638	29.64	1	29.6	1	, ,,	99	24.3
		E LES	28·8 28·6	1	99	, ,,	35· 38·
28.494		1	28.0	1	"	"	39.6
28.224		0	and the second		"	"	43.2
20 221		2 7 21	28.0	1	,,	,,	46.
		17.73	27.6	2	,,	,,	51.
			26.9	1	77	10.7	61.
26.566	26.56	1	26·6 25·6	1 1	,,,	"	78.
Total I		N	25.3	i	"	"	83.
24.884		0	24.8	î	*2	99	88.1
23.849	23.85	2			,,	,,	36702.1
	23.68	2 0	23.7	1	,,	,,	04.3
23.248		0	23.3	1	,,	,,	10·2 18·
			22·7 22·3	1	,,,	,,	23.
21.443		0	24.9	1	"	,,	34.5
21 440			20.9	l ln	,,	,,	42.
20.534	20.55	2	20.4	1	,,	,,,	46.7
19.906		0			,,	,,,	55·3 69·
		1232	18.9	1	"	"	73.
15.590		0	18.6	In	"	99	84.7
17·730 16·612	- 1300	0	16.6	1	99	"	99.9
10 012			16.5	1	,,	,,	36801
		L EVE	16.1	ln	,,	,,	07.
		1	15.2	1	,,	19	19· 26·5
7.4.040	19.0*	1	14.1	4	,,	"	35.9
14·643 13·195	13.95	1	14.1	4	22	29	46.2
12.817	12.82	3	12.8	1	,,	, ,,	52.7
THE STATE OF THE			12.3	1	"	99	58.
	0 10 3/4		12.0	1	,,	99	62· 70·6
11.402		0	11.6	1 1	99	,,	79.
	Contraction of		10.8	1	,,	,,	81.
10.177	10.18	1	10.3	1	"	,,	87.2
10.11	10.10	13.61.9	09.5	1	22	,,	96.
		Julia El	09.2	1	,,	,,	36900.
F Paris Fill Con			08.8	1	"	"	06.7
08.752	L. F. E. S. E.	0	08.7	2	"	"	18.
	BO B ATT	1978	07.7	1	"	"	21.
07.265	THE STATE OF THE S	0	07.3	î	"	,,	26.9
06.985	THE PERSON	0	07.1	1	"	,,	30.8
05.632	05.65	1	05.5	1 1	,,	99	49.1

From "NATURE" (Dec. 5th, 1907).

"We have recently had an opportunity of inspecting and testing the binocular diffraction spectroscope patented and sold by Dr. Marshall Watts, and have found it to be a remarkably efficient instrument for the spectroscopic investigation of lightsources of definite form, such as vacuum tubes. It consists of an ordinary good field-glass having attached in front of each object-glass a transparent diffraction grating mounted on optically worked plane glass. In examining a luminous vacuum tube we found that the bright lines apparently stood out in relief, whilst the illumination, even in the second and third orders, was very satisfactory. The first-order spectrum of Capella, on by no means a perfect night, was seen as quite a bright colour band. For the examination of broader lightsources, such as flames or arcs, a metal or ebonite plate with a slit in it may be usefully employed in order to obtain a purer spectrum. The price of the binocular spectroscope is £3 3s., and furthur details of the instrument may be obtained from Dr. Watts, "Shirley," Venner Road, Sydenham."

Sir W. HUGGINS says:-

"I am very pleased with your spectroscopic opera-glass. It does all that you say of it. The whole visible spectrum of a vacuum tube, or of an induction spark, is seen at once, brilliantly, and with great distinctness."

Chalcat indicate of the spectroscopic investigation of light-

Sig W. BUCCONS mays.

"I am rely pleased with your spontenedth come place. It does that that you say it. The whete which spectrum of a comparation aparts is seen at once, included and its seen at once in the great distinctions."

IRIDIUM—continued.

A	rc Spectrum		Spark Spe	ectrum	Reduc	tion to	
Wave-	length	Intensity	Wave-length	Intensity	Vacı		Oscillation Frequency
Kayser	Exner and Haschek	and Character	Exner and Haschek	and Character	λ+_	$\frac{1}{\lambda}$	in Vacuo
2705·453 05·296	3	0		. 4	0.78	10.7	36951·7 53·8
05.213	2705-21	ln			"	"	55.0
	05.02	1	2705.1	1	"	"	57.8
		Ne Fin	04.8	ln l	99	,,,	61.
04.722	04.10	0	0.1.0		"	,,	61.7
04.117	04.12	2	04.0	1	,,	99	69.9
			02·8 01·7	1	,,,	10.8	88.
			01.4	1	"		37003· 07·
01.200	01.21	ln	OIT		"	"	09.7
01 200			01.1	. 1	"	"	11.
			00.5	1		"	19.
2698.688		2	2698.7	. 1	0.77	,,	44.2
			98.1	1	,,	,,,	52.
			97.5	1	99	"	60.
			97.2	1	"	"	64.
96.010	96.04	1	96.9	1	99	"	69· 80·8
95.550	95.57	ln ln	95.6	1	"	23	87.2
50 000	300.	111	95.1	1	,,	"	94.
94:320	94.33	5	94.3	2	"	"	37104.2
93.571	93.60	1	93.5	1	"	"	13.8
			93.4	1	"	"	17.
92.964	92.99	1		1	"	"	22.8
00.100	00.44		92.8	ln	"	"	25.
92.429	92.45	3br	92.4	1	22	"	30.2
92·267 91·998		0	92.2	1	37	99	32·6 36·3
91.999		0	91.5	1	"	99	43.
91.154	91.19	1	313	-	"	17	47.7
01 101	01.10		90.7	2	"	"	54.
89.769		0			"	"	67.3
88.381		0	88.2	1	,,	"	86.3
			87.6	1	99	29	97.
	Control of the second		87.1	1	"	,,,	37204
	Table 1	MANE	86.8	1	"	99	08.
		light Bui	86·3 85·7	1	99	99	15.
			85.1	1	"	99	32.
			84.8	i	"	"	36.
	84.15	2	84.0	2	"	"	44.9
83.387		0	83.2	1	"	"	55.5
The state of the s	Les hearth		82.8	1	"	"	64.
82.536	82.55	1	82.6	1	,,	19	67.3
01.104	01.00	Phillippid	82.2	1	,,	99	72.
81.184	81.22	1	81.3	1	29	99	85.9
	The latest	of the party	80·5 80·1	1	"	99	96· 37301·
79.506	79.51	1	79.3	i	39	22	37301.
10000	79.17	2	100	1.	29	"	13.2
	1		78.7	1	"	10.9	21.
		100	78.3	î	"	,,	26.
77.899		0	77.7	1	"	19	31.8

IRIDIUM—continued.

A	rc Spectrum		Spark Sp	ectrum		tion to	
Wave-	length	Intensity	Wave-length	Intensity	Vac	aum	Oscillation Frequency
Kayser	Exner and Haschek	and Character	Exner and Haschek	and Character	λ+	$\frac{1}{\lambda}$	in Vacuo
2676-911	2676.93	2	2676.7	1	0.77	10.9	37345.5
		100	76.2	1	,,	99	55.
	A CONTRACTOR		75.7	1	,,	,,	62.
75.376		0	75.4	1	"	,,	67.0
		I Bearing	75.2	1	,,	,,	69.
we and	mo mo		74.3	1	,,	,,	82.
73.694	73.70	3	73.8	1 2	"	,,	90.5
70.000		0	73·5 73·0	1	"	,,	93.
72·888 71·930	71.93	4	71.9	1	"	,,	37401·8 15·2
70.006	70.01	4	70.0	1	"	"	42.2
10 000	69.56	1	69.5	i	"	"	48.5
69.070	69.09	2	69.0	i	"	"	55.2
03 010	00 00		68.5	î	"	"	63.
68.362		0	00 p		,,	***	00
00 002			68.2	1	"	"	67.
		TE LET	67.9	i	"	,,	72.
67.540	67.54	1	67.5	1	"	"	76.8
		Tara Bar	66.6	1	"	,,	90.
	66.50	1		AND LIKE	"	"	91.4
			66.4	1	"	"	93.
	Mark Mark		65.7	1	"	,,	37502
65.144		0			,,	,,	10.5
64.871	64.87	5	64.9	2	,,	,,	14.4
			64.6	2	,,	,,	18.
63.400	63.42	2	63.5	1	,,	,,	34.9
62.706	62.71	3	62.7	1	"	,,	44.8
62.080	62.10	5	62.2	1	,,,	,,	53.6
			61.7		"	99	59.
00.000			61.3	2	***	,,	65.
60.163		0			,,	,,	80.8
60.040	PART OF THE	0	FO. F	1	. ,,	"	82.5
			59.7	ln ln	"	"	87.
EM.009		0	58.3	111	"	"	37607
57·993 57·799	57.82	1	57.7	1	"	,,	11·5 14·2
31.199	31.04	1	57.6	1	,,	"	17.
56.898	56.91	2	56.8	î	"	"	26.4
00 000	30 31		56.2	i	,,,	"	37.
			56.1	î	"	"	38.
			55.7	În	,,	"	44.
54.670		0	54.7	În	0.76	11.0	58.6
54.033	54.05	2	53.9	i	,,	,,	67.5
53.853	53.86	2	53.9	1	"	"	70.1
	-		53.7	1	"	"	72.
			53.2	1	,,	,,	79.
53.124	53.13	1		2 1	,,	,,	80.5
			53.0	1	,,	,,	82.
	52.76	ln l			,,	,,	85.6
	52.60	ln		3	,,	,,	87.9
			52.1	1	"	,,	95.
	MARINE NAME OF THE PARTY OF THE		51.8	1	"	"	99.
	100000000000000000000000000000000000000	DE WELL	51.4]	,,	,,	37705.
			50.7	1	,,	,,	15.

IRIDIUM-continued.

A	rc Spectrum		Spark Spe	ectrum	Reduct		
Wave-	length	Intensity	Wave-length	Intensity	Vaci	uum	Oscillation
Kayser	Exner and Haschek	and Character	Exner and Haschek	and Character	λ +	$\frac{1}{\lambda}$ -	in Vacuo
2650.584	11 St. XE.	0	2650.5	1	0.76	11.0	37716.5
		PSE SE	50·2 49·7	ln	"	"	29.
			48.7	1	"	"	43.
		HE RE	48.4	i	"	"	48.
			47.3	În	"	"	63.
			46.8	1	"	"	70.
46.334	2646.35	1			"	"	77.0
10 001	2010 00	1	46.1	1	,,	"	80.
	. =		45.8	1	"	,,	85.
			45.7	1	,,	,,	86.
			45.3	1	,,	,,	92.
			44.5	1	"	,,	37803
44.279	44.28	2			,,	,,	06.4
	Second to the		44.1	1	"	"	09.
			43.5	ln	"	"	18.
		THE SE	43.3	ln	"	. "	20.
			41.5	1	"	"	46.
	10.44		41.0	1	,,	"	62.2
40.462	40.45	1	40.4	1	,,	"	70.7
00 810	39.80	4	39.8	1 1	,,,	"	74.8
39.510	39.51	2	39.4	1	,,,	"	81.2
39.073	39.06	1	38.7	1	"	27	86.
			38.3	1	"	"	92.
			37.8	i	"	"	99.
	THE REAL PROPERTY.	The state of the	37.5	1	99	"	37904
37.407		0	010	- 0°	"	"	05.0
91 401			37.3	1	"	"	07.
36.967		0			,,	"	11.4
			36.7	1	,,	"	15.
			36.4	1	,	,,	20.
			35.7	1	,,	,,,	30.
35.353	35.35	2	12 17 189		,,,	,,	34.6
	133175		35.1	1	"	,,	38.
34.513	The Control of	0			"	"	46.7
34.340	34.33	3	34.2	2	"	"	55.2
	41117	E Note La	33.1	1	"	11.1	67.
			30.5	1	"	11.1	38004
			30.0	1	,,,	"	19.0
29.498	29.49	1	29.4	1	"	"	25.
		The state	29.1	1 1	>>	"	31.
00.0M1	The second		28.7	1	"	**	36.7
28.271	THE STATE OF	0	28.0	1	"	"	41.
		1 1 1	27.1	1	"	29	54.
26.844	26.85	2	211	1	99	"	57.4
20.944	20.00	4	25.6	1	"	97	76.
25:396	25.43	2	200	1	"	"	78.1
20 000	20 10		24.6	1	,,	"	90.
		13 136	24.1	î	,,	"	97.
23.736	23.75	ln			,,		38102.4
20 100	20.0	THE RES	23.5	1	,,	••	06.
		The second	23.0	1	,,	19	13.

IRIDIUM—continued.

Aı	cc Spectrum		Spark Spe	ectrum	Reduc	tion to	
Wave-J	length	Intensity	Wave-length	Intensity	Vacı	ıum	Oscillation Frequency
	73 3	and	70 1	and		7	in Vacuo
Kayser	Exner and Haschek	Character	Exner and Haschek	Character	λ+	$\frac{1}{\lambda}$	
2622.203		0			0.76	11.1	38124.8
21.610		0	2621.6	1			33.4
21 010			21.1	î	"	19	41.
THE RELET	THE STREET		20.6	î	"	3 9	48.
20.102	2620.00	2	200	1	"	"	56.1
19.967		2	19.9	1	22	"	57.3
		10000	18.7	. ib	"	"	76.
18:352		0	rovan Bahah		"	"	80.5
17.872	17.86	3	17.8	1	"	"	87.8
17.514		0			"	"	93.1
17.177		0	17.1	2	,,	"	98.0
TARREST STATE		1	16.3	1	,,	,,	38211
		DATE OF THE	16.2	1	,,	"	12.
16.090	16.08	1			,,	"	14.0
Supply Services	16.00	1	15.8	1	22	,,	15.2
	S. Maria		15.5	1	,,	,,	23.
15.064	15.06 -	2	15.1	1	"	29	28.9
Charles Till Carlo			14.9	1	,,	,,	31.
14.287	14.27	1	14.1	1	,,	23	40.4
			13.7	1	,,	,,	49.
12.344	12.35	1	12.2	1	"	22	68.6
12.136	12.13	1	12.2	1	,,	"	71.8
To the second of the second		N 80 86 8	11.8	1	,,	"	77.
11.384	11.40	3	11.4	2	299	,,	82.7
THE PARK		FAEL SE	10.5	ln	,,	,, .	96.
10.198		0	10.0	1	0.75	,,	38300.2
09.996		0		100	,,,	,,	03.1
	The state of the last		09.8	1	23	22	06.
08.314	08.30	3		1	"	11.2	27.8
			08.1	2	"	"	31.
07.608	07.60	2	TOTAL VI		**	. 29	38.2
			07.3	1	22	,,	43.
100000			07.0	1	"	,,	47.
06.668		0	00.4		"	22	51.9
00.007	The same		06.4	2	"	"	56.
06.081	04.04	0		LE COLL IN	,,,	,,	60.5
04.645	04.64	1	OALE	1	"	"	81·7 84·
1		1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	04·5 04·1	1	99	97	90.
	Jacob et al.	The state of the s	03.8	ln ln	"	"	94.
THE PROPERTY OF		Boots and La	02.8	1	""	"	38409
02.122	02.15	1	02.6	1 -12	"	"	18.8
02 122	02 10	1/4/50/18	02.0	1	"	,,	21.
		HO HIE	00.9	1	"	. 57	37.
	NE CO	1 30 0	00.7	i	"	"	40.
2599.224	1000	0	2599.4	2	"	,,	61.8
99.129	2599.15	2		1	"	"	63.1
		THE STATE	99.0	2	77	"	65.
	- B	With the	98.3	2	,,	99	76.
400			97.5	1	"	,,	86.
95.914	95.93	ln			,,	,,	38510.8
A 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Wat - Char	100	95.7	4	,,	,,	14.
95.188		0	95.2	1	,,	,,,	21.7
			94.6	1	,,,	**	30.

IRIDIUM—continued.

A	rc Spectrum		Spark Spo	etrum	Reduc	tion to	
Wave-	length	Intensity	Wave-length	Intensity		uum	Oscillation
Kayser	Exner and Haschek	and Character	Exner and Haschek	and Character	λ+	$\frac{1}{\lambda}$	in Vacuo
9709 994							
2593.224		1	2593.0	1	0.75	11.2	38550·8 54·
	THE PARTY OF		92.7	1	"	"	59
92.146	2592-15	3	92.0	2	"	"	668
91.927		1			"	"	70.1
			91.5	1	,,	"	76.
91.129		1			**	,,	82.0
			91.0	2	"	,,	84.
90.296		0	90.5	1	"	"	91.
30 230		U	90.1	1	27	"	94.4
	T Carl Di	ETE WITCH	89.6	1	"	39	97.
89.470		0	000		"	"	38605
89.231	The said of	0		0 -	"	"	10.3
89.057		0	89.1	1	"	"	12.9
	TO THE OWNER.		88.5	1	"	11.3	21.
			87.5	1	,,	,,	36.
			87.1	1	,,	"	42.
86.146	86.14	1	86.0	8	,,	,,	56.3
84.867		0	84.8	1	"	"	75.4
00.001	00.00		83.6	1	"	"	94.
83.261	83.26	1	83.0	1	,,	22	99.5
81.523		0	81.8	1	"	"	38721
81.019	The Market N	0	81.2	1	"	,,	25·5 33·1
79.860	The second second	0	01.7	1	"	"	50.5
79.573		2	79.6	6	"	"	54.8
			79.4	6	"	22	57.
79.008	79.00	2		1000	"	"	63.4
78.794	78.78	2	78.8	1	"	"	66.6
			78.6	1	,,	,,	69.
			78.2	1	,,	,,	75.
77.622	5	0	77.8	•1	,,,	,,,	84.1
	77.35	3			"	>>	88.2
		E , E - IW	75.2	1	99	19	38821
			74·5 74·2	1 1	, ,,	59	31.
73.338	The second second	0	73.5	1	"	>>	36· 48·7
72.784	72.79	2	72.7	2	"	"	57.0
72.459	72.47	ī	72.5	1	"	"	61.9
72.156	72.16	ī	72.2	i	"	"	67.6
	The state of the s		71.9	1	"	**	70.
	70.70	1		CAST LEGIS	,,,	,,	88.6
00.000	60.07		70.5	1	"	"	91.6
69.962	69.97	2	20.6		"	"	99.7
68.407	65000	0	68.6	1	,,,	"	38923.3
		auto and	68.1	1 1	"	"	28.
		The second	67·6 67·0	1	"	"	35.
	1		66.7	1	"	"	45.
66.442	1	0	001		"	"	53.1
30 112	Carolina Ma	1	66.2	ln	"	"	57.
	1 THE R. P. LEWIS CO., LANSING, MICH.	1000000	65.3	ln	"	"	70.
64.922	The state of the	0	A FIGURE	5-850	0.74	"	76.1

IRIDIUM—continued.

AI	e Spectrum		Spark Spe	ectrum	neduction to		
Wave-l	ength	Intensity	Wave-length	Intensity	Vae	uum	Oscillation Frequency
	Exner and	and	Exner and	and		1	in Vacuo
Kayser	Haschek	Character	Hasehek	Character	λ+	$\frac{1}{\lambda}$	
MENINE :			2564.4	1	0.74	11.3	38984·1
2564.253	2564.27	2			,,	,,	86.5
69.965	60.06		64.0	2	"	,,	90.
63·365 62·999	63.36	1 0	63.3	ln	"	"	99·9 39005·3
02 333		0	62.8	2	"	"	98009.9
			62.5	ī	"	"	13.
			61.8	1	,,	,,	24.
			61.7	1	"	"	25.
THE STATE OF THE S			61.1	2	"	79	34.
59.643		0	60.1	ln	"	"	50· 56·5
00 010			59.2	1	"	"	63.
58.821		0	002		"	"	69.1
			58.3	4	,,	"	77.
440			57.7	1	,,	"	86.
57.285		0	57.2	1	,,	"	92.6
56.860		1	56.5	1	"	"	99.1
55.955	55.95	1	90.9	1	"	"	39104·6 13·0
00 000	00 00		55.6	1	"	"	18.
55.425		2			"	"	21.0
			55.1	1	19	22	26.
54.480	54.47	2		Total I	,,	,,	35.6
180			54.1	4	"	"	41.
51.475	51.50	2	53.6	1	"	"	49· 81·4
01 470	31 30	2	51.2	1	"	"	86.
50.987		0			"	"	89.1
			49.4	1	,,	,,	39214
			49.3	1	,,	"	15.
	T. A. M.		49.0	1	,,	11.5	20.
	47.76	i	48·0 47·6	1	"	"	35· 38·7
	41 10	-	47.5	i	"	,,	41.
47-278	47.26	1	47.2	ln	"	"	46.2
45.868		0	45.9	1	,,	,,	67.8
45.620	45.62	1	PHER CHIE	Fig. 10	"	,,	71.7
11.000	44.00	needle to	44.4	1	,,	"	91.
44.059	44.08	4	43.9	2	"	"	95·6 98·
Mary No. 18	- Store	State Silver	43.5	1	"	"	39304
	24 美雪田。	NO MINIST	43.2	î	"	"	09.
10.5		THE REAL PROPERTY.	42.7	1	"	"	17.
42.097	42.11	2			,,	"	26.0
43.550	47 50	F. 30 - 18	41.7	1	"	,,	32.
41.556	41.56	1	41.9	1	"	"	34·6 38·
	155127		41·3 40·8	1	. ,,	"	46.
40.483	40.49	1	40.5	i	"	"	51.1
meteral 20	Man Maria	199	40.3	1	"	"	54.
			39.6	1	,,	,,	65.
38.949	Charles of the State of the Sta	0	WHEN SELECTION OF		,,	,,	74.9

IRIDIUM-continued.

A	rc Spectrum		Spark Spe	ectrum	Reduction to		
Wave-	length	Intensity	Wave-length	Intensity	Vacuum		Oscillation
Kayser	Exner and Haschek	and Character	Exner and Haschek	and Character	λ+	$\frac{1}{\lambda}$	in Vacuo
2538-548		0	2538.2	1	0.74	11.5	39381.1
37.770	2537.78	1			"	"	93·1
37.309	37.30	2	37.6	1	"	"	96· 39400·4
36.760		0	37.1	1	",,	"	04.
30.100		U	36·7 36·2	1	"	,,	08.9
			36.0	i	"	"	21.
			35.3	În	"	"	32.
34.103		0	34.2	2	,,	"	50.2
			33.7	1	,,	,,	56.
		- 12 - D.O.	33.4	1	,,	"	61.
	33.24	3			,,	"	63.6
	Les La Tari		33.0	2	,,	"	67.
	32.63	1	THE STATE OF THE S		"	"	73.1
32.290	32.29	ln	32.3	1	,,	"	78.4
			32.0	1	"	"	83.
	Fig. 12		31.7	1	"	,,	88.
			31.1	1	"	"	97.
30.786		0	30.8	1	"	,,	39502-1
30.498		0	30.4	2	,,	100	06.4
30.200		0	THE RESERVE	1 - 12	"	11.6	11.0
29.870		0			"	,,	16.1
29.559	29.56	2	29.6	1	"	,,	21.0
	- Ster HER		29.4	1	"	,,	23.
			28.4	2	"	,,	39.
28.011		0		S. H. Willy	,,,	,,	45.1
27.868		0	27.7	1	,,	,,	47.4
	MUS III		27.4	1	"	"	55.
26.856		0	26.7	1	"	"	63.1
		157 8	26.5	1	,,	"	69.
			25.7	4	"	,,	81.
		E. H. C. C.	25.3	1	"	"	88.
	25.16	1	25.1	1	"	"	89.8
24.953	24.99	1	24.9	1	,,	,,	93.1
			23.9	1	,,	,,	39610
			23.7	1	"	,,	13.
23.290	1. 1. 2. 3. 1.	0		The state of	"	"	19.1
		Letter HE	22.8	1	"	27.	27.
		PIESIS	21.7	1	"	22	44.
21.175		0	21.2	2	,,	,,	52.4
	ESTATE OF THE	100000	19.9	1	,,	,,	73.
			19.5	1	"	,,	79.
	CHI HILLIAM	14 Bell 3	19.1	1	,,	"	85.
		12:30 6	18.6	1	,,	,,	93.
	ALL STATES OF		18.1	2		,,	39701
	E CONTRACTOR		17.8	2	0.73	,,	06.
15.448	15.45	1	15.4	1	,,	,,	42.7
13.799	13.80	2	(1986)		"	,,	69.8
	DE SITE	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	13.6	1	"	,,	72.
	E FLORE STREET	TO LAR	13.2	1	,,	"	78.
12.665	12.66	2	12.5	8	"	,,	86.8
12.191	A STATE OF THE STA	0	William William	The second	,,	,,	94.3

IRIDIUM—continued.

Intensity and Character Intensity and Ch	Ar	c Spectrum	100	Spark Spe	ectrum		tion to	
Exher and Haschek Character Haschek Character A + 1	Wave-l	ength		Wave-length		Vac	uum	Oscillation Frequency
2512·096		Exper and		Exper and			1	in Vacuo
09-798 09-80 1 09-7 1 ,, 11-7 39832-1 08-434 08-42 1 08-3 1 ,, 53-9 07-712 07-70 1 07-6 1 ,, 65-4 06-70 1 06-6 1 ,, 38-7 05-814 05-82 1 ,, 38-9 05-308 0 ,, 39-9 3903-5 04-446 04-44 1 ,, 39-2 02-710 02-72 2 02-7 1 ,, 39-2 02-710 02-72 2 02-7 1 ,, 39-2 00-357 00-36 1 00-2 1 ,, 39-2 2499-36 2 97-0 1n ,, 39-2 2499-36 2 96-3 1 ,, 39-2 94-9 1 ,, 39-2 ,, 39-2 95-951 0 ,, 39-2 ,, 39-2 94-9 1 ,, 39-2 ,, 39-2 97-0 1n ,	Kayser		Character		Character	λ+	λ	
08-434						0.73		
07.712 07.70 1 07.6 1 0.66.0 1 0.67.0 1 0.67.0 1 0.67.0 1 0.67.0 1 0.67.0 1 0.67.0 1 0.70.0<						. ,,	11.7	
06·70						"	"	
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	07.712	07.70	1					
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	F490 (\$3000)	06.70	1	0.0	1			
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$		00.0		06.5	1			
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$		The State of the S			1			89.
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$		05.82		135-156	Y HE	,,		
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$,,	,,	
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$,,,	"	
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$				09.77	1		1	
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	02-710	02.12	2					
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	00.357	00:36	1					
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	00 001	0000						
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$		2499.36	198 1	E CONTRACTOR OF THE PARTY OF TH			1 - 1 10	
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$,,	1	
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	100	MILE ASSET				,,,	,,,	
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	0400 000		0					
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$				90.3	1			
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	99.991		0	94.9	1			
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	LANE COLUMN	Turnita (A SEW			100		
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	918	Market Barrier	A COLOR		1	1000	,,	82.
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	1 1 1 1 1					,,,	11.8	
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$		93.16				,,	"	
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$				92.3	1	"	"	
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	91.778	1 1 1 1	0	90.6	1	1	100	
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	0.00			1				
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	89-293		0			1		
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$		A STATE OF	On		4		1 11 -1	75.8
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$						39		
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	PER LEAD			87.1"	1	"	"	
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$				000		"	"	
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	86.463		0				1	
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	Salar Tools	85.46	1	00.9	1	1		
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	A PERSON DE	00 10		85.3	1	10000		
$\begin{array}{ c c c c c c c c c c c c c c c c c c c$						-	100	35.
$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$								
$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$	1111	AND THE TA	DE L			,,,	,,	
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	00.000			83.0	1	,,,	,,	
80-685 0 79-8 1 ,, , , 99-6		01.07		91.9	9	1	100000000000000000000000000000000000000	
79.8 1 ", ", 40314.		81.27		01.2	4		1	
" " "	30 000			79.8	1		The state of	
	79.255	A CONTRACTOR	0	79.4	1	23000		23.1
78.9 1 ,, ,, 28.		lange with				"		
78.6 1 , , 34.		and the second	- Inch	78.6		"	,,,	
$\begin{array}{ c c c c c c c c c c c c c c c c c c c$	78.190	78.20	1			1 Cart	1 1 1 1 1 1 1 1 1	
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$		116	1 49 3					

IRIDIUM—continued.

Aı	re Spectrum		Spark Spe	ectrum	Reduction to		
Wave-	length	Intensity	Wave-length	Intensity	Vacı	uum	Oscillation Frequency in Vacuo
	Exner and	and	Exner and	and		1_	in Vacuo
Kayser	Haschek	Character	Haschek	Character	λ+	λ	
This is the	A CANA		2476.0	1	0.73	11.9	40376
2475.209	2475.19	3	75.1	1	**	,,	89.0
74.170		1	74.3	1	,,	,,	40405.7
H-100		0 1 2	73.3	1	,,	,,,	20.
72.709		0	72.6	2	,,,	99	29.6
FO COF		0	71.6	1	"	,,	48.
70·607 70·143		0	70.7	1	0.72	"	64.0
69.848		0				"	71.6
69.594		0	69.5	2	,,	,,	76·4 80·6
09 994			69.0	i	**	"	90.
68.705		1	000		"	"	95.2
68.263		0	68.4	1	"	99	40502.4
00 200	67.45	1 Pt ?	67.5	i	,,,	,,	15.8
67:382	67.37	2	67.3	î	22	"	17.0
	0,0,		66.7	î	,,	"	28.
			66.1	1	,,	"	38.
			65.5	1	,,	,,	48.
	65.16	1	65.0	1	,,	,,	53.4
	64.96	1			,,	,,	56.7
64.462					,,	,,	64.9
63.118	63.10	1	63.2	1	,,	,,	87.2
			62.8	1	,,	,,	92.
62.454	62.47	1	62.3	1	,,	,,	97.9
		E20 100	61.8	1	,,	"	40609
		R 48-56	58.0	1	,,	12.0	71.
57.312	57.31	1			,,,	,,,	82.9
57.123	57.12	1	56.5	2	- 99	"	86.6
56·882 55·949	55.95	1			,,	,,	90·0 40705·4
55.691	55.69	2	55.5	2n	"	",	09.7
54.945	99.09	-	54.9	2	"	,,	22.1
94 940	54.67	1n	94 9	2	"	"	26.7
	01 01	III	54.5	1	"	"	29.
54.212	54.20	1	54.1	1	"	"	34.4
Harry Town	31 23		53.7	i	"	"	43.
52.893	52.89	2	52.7	î	"	"	56.2
Bur B D R		1 1 1	52.5	1	"	"	63.
			52.2	1	"	"	68.
			51.7	ln	, ,,	,,	76.
		E. D.	50.8	1	,,	19	91.
		E SECTION AND ADDRESS OF THE PARTY OF THE PA	50.4	1	,,,	,,	98.
49.916		0		THE REAL PROPERTY.	,,	"	40805.8
40.770	40.70	100	49.5	1	,,	57	13.
49.112	49.10	ln	48.8	1	,,	"	19.1
40.010	40.00	PICE WAY	48.6	1	,,	,,	28.
48.316	48.30	1	Bank & 183 183	No. of the last	"	"	32.4
47.850	47·84 47·53	1			"	,,	40.3
	41.93	1	47:3	1	"	,,	45.5
46.926	Side of the	0	4/3	1	"	,,,	55.6
40 940	THE PERSON NAMED IN	U	45.5	1	"	27	79.
	45.39	1	100		22	>>	81.3
45.184	10 00	1	45.2	1	"	"	84.7

IRIDIUM—continued.

-	Ar	c Spectrum		Spark Spe	ectrum	Reduct		
-	Wave-l	ength	Intensity	Wave-length Vacuum Intensity		ıum	Oscillation Frequency	
-		Exner and	and	Exner and	and		1	Frequency in Vacuo
	Kayser	Haschek	Character	Haschek	Character	λ+	λ-	
				2444.5	1	0.72	12.0	40896
			Paral Lil	44.1	1	,,	12.1	40903
				43·3 42·6	2	,,		16· 28·
1				41.8	1	"	,,	41.
				41.3	1	"	"	50.
1				40.8	î	"	"	58.
	e de la company		6 4 9 5	40.3	2	"	,,	67.
1	TOTAL			39.7	1	,,	,,	77.
1			1	39.3	1	,,	,,	83.
			B B B	37.3	1	22	,,	41017
1	2436.513	2436.50	ln	20.0		"	,,	30.3
1		Market Street		36·2 35·1	l ln	"	"	35· 54·
-				34.5	1	"	"	64.
	34.107		0	34.1	i	"	"	70.7
	33.433		0	33.6	i	, ,,	,,	82.1
1				33.0	1	,,	,,	89.
-		32.64	1	S STATE OF		,,,	,,,	95.5
1	32.439	32.41	1	32.5	1	99	"	99.1
1	32.021	32.04	2			"	"	41105.8
1	31.331	31.34	2	31.3	2	"	"	17·6 28·
				30·7 30·5	1	"	"	32.
1			THE STATE OF	30.0	1	"	"	40.
1	29.830		0	29.7	ln	"	,,	43.0
	20 000	The same		29.0	1	"	"	57.
1	27.878		2	27.8	2	,,	12.2	76.0
	27.694	27.71	2			,,	,,,	79.0
1	27.189		0	The same		,,	,,,	87.7
	26.875		0			,,	,,	93.0
1	26.622	26.61	1	26.5	1	,,	"	97.4
-	07 744	25.75	1	26·2 25·8	1	"	"	41205
	25·744 25·069	25.07	1	20.9	1	"	"	23.7
-	24.971	25.01	1	24.9	2	"	"	25.1
1	24.741	24.74	i	24.7	2	,,	,,	29.3
	24.406	24.40	1	24.3	1	",	,,	35.1
	22.286	RE SHOOTED	0	The Marine R.			,,	71.2
	21.306		0			0.71	77	87.8
	40.000			19.2	1	,,	"	41324
	18.657	10.10	0 2	18.5	1	,,	,,	33·0 41·1
	18.190	18.18	2	18·1 18·0	1	,,	"	41.1
	THE STATE OF	•	The same	17.3	1	,,	,,	56.
	16.672	A. 1	0	16.8	i	"	"	67.0
-	16.334		0			"	,,	72.8
-	15.950	15.95	1	16.0	2 Rh ?	,,	"	79.4
-	14.473	6 200	0		THE SEC.	,,	,,	41405.7
		FIF	F-46	13.3	1	,,	,,	24.8
	1081-120-	E LARGE		13.2	1 2	,,	12.3	27· 33·
	7.2			12·8 12·5	1n	"		38.
	- Teliano	10 10 10		11.9	ln	"	1 ;;	49.

IRIDIUM-continued.

A	rc Spectrum		Spark Spe	ectrum	Reduction to		
Wave-	length	Intensity	Wave-length	Intensity	Vacu		Oscillation Frequency in Vacuo
Kayser	Exner and Haschek	and Character	Exner and Haschek	and Character	λ+	$\frac{1}{\lambda}$	in Vacuo
			2411.0	1	0.71	12.3	41464
2410.818	2410.82	1			"	,,	67.4
10.264	10.26	2			"	,,	77.0
09.465	09.46	1	10·1 09·5	2	"	"	80· 90·7
09.405	09.40	1	09.1	1	"	"	97.
			08.5	2	"	"	41507
	The state of the s		08.0	1	"	"	16.
	07.66	1			99	,,	21.8
	1000		07.1	1	"	,,	31.
06.115		0	07 011		,,	,,	48.5
05.955		0	05·8" 05·0	In 1	,,	"	51.2
	1 S S S S	The state of	03.6	1	"	"	92.
03.113	Har I Barrier II	0	03.1	î	"	"	41600.4
00 110			02.8	i	,,	,,	06.
02.379		1			,,	, ,,	13.1
[01.866	01.86	2	01.7	1	,,,	,,	22.0
1			01.2	1	"	,,	34.
Ma a a	10 - 70 Land		00.4	1	"	"	47.
		0	2399·2 98·7	6	"	"	68· 74·8
2398.824		0	97.2	1	"	12.4	41703
	SE STORY	DE B	96.1	1	"	,,	22.
95.974		0			"	,,	24.3
			95.4	1	,,	"	34.
94.404	2394.41	ln			,,	,,	51.6
			94.1	1	. ,,	"	57.
			93.1	1	"	, ,,	74.
91.282	91.29	3	92·9 91·2	1 2	"	"	41806.1
90.706	90.71	2	90.5	2	"	"	16.2
90 700	30 11	-	89.7	ī	,,	"	34.
			89.4	1	"	"	39.
			89-0	1	,,	,,,	46.
			88.6	1	"	"	53.
00.007	64.00		87.8	1	"	"	67· 81·5
86.981	86.98	2	86.7	2	"	,,	86.9
86.665	86.67	1	86.4	2	"	"	92.
			84.8	6	"	"	41920
83.840	Marine Des	0	010		"	,,	36.7
		HER BURN	83.1	In	,,	12.5	50.
82.270		1	The sale of		"	99	64.3
MALL LAND	31.86	1	81.8	6	",	,,	71.5
81.714	81.72	1	00.0	1	"	,,	74·0 88·
	THE STATE OF	DE BOOK	80.9	1	"	"	99.
	79.45	1	79.5	1	"	"	14.0
	15 40		78.0	2	"	"	40.
	Particular B	Part Series	77.2	ī	"	,,	54.
			76.5	ln	,,	,,	66.
	100000000000000000000000000000000000000		75.8	1	,,,	,,	79.

IRIDIUM—continued.

A	rc Spectrum		Spark Spe	ectrum	Reduct		
Wave-	length	Intensity	Wave-length	Intensity	Vacu	um	Oscillation Frequency in Vacuo
	Exner and	and	Exner and	and		1_	in Vacuo
Kayser	Haschek	Character	Haschek	Character	λ+	λ	
2375.195	2375.21	1	2375.2	1	0.71	12.5	41989-2
			74.8	1	0.70	"	96.
	79.00		73.8	1		"	42114.
72.856	73·23 72·86	ln 3	73·3 72·8	ln 2	"	"	24·2 30·8
70.462	12 00	2	123	-	"	"	73.4
			69.2	1	"	22	96.
68.486		0			"	12.6	42208.5
68.120		4	68.2	1	"	,,	15.0
Part .	68.11	2	68.1	8	,,	,,	15.2
67.469	07.70	0		13,10	,,	,,,	26.7
	67.12	ln	00.1		"	99	32·8 51·0
65.849	A FLORING	1	66.1	1	99	"	55.5
09.949		1	64.0	1	,,	"	89.
63.134	63.14	2	63.2	2	"	"	42304.0
			62.7	ī	,,	,,,	12.
	1 1 1 1 1 1 1 1 1 1		61.7	1	,,	,,	31.
60.790	60.80	1	60.6	1	,,	,,	45.9
59.668		0	The Street of		,,	,,	66.2
			59.4	2	,,	99	71.
	58.25		58.8	2	,,	"	82· 91·7
	58.25	1	58.0	2	"	"	96.
57.623	ALL WAR	0	98.0	4	"	"	42403.0
8, 028			57.3	1	,,	"	09.
56.674	56.68	1	56.7	1	22	99	20.0
56.388	Man Care Control	0		1116	,,	,,	25.2
56.122		0			,,	,,	30.0
			55.9	1	,,	,,	34.
×× 000		The State of the	55.5	1	,,	,,,	41.
55.082	55.11	1	53.1	2	"	12.7	48·5 84·
			50.5	2	"		31.
52.705		1	90.9	2	"	,,	91.6
02 100		1.	52.0	1	"	"	42504
51.492	The Carlotte	1	51.4	În	"	,,	13.5
			50.5	2	,,	,,	31.
50.136		0			,,	,,	38.0
49.790		0			,,	,,,	44.3
		THE PARTY NAMED IN	48.2	1	,,	,,	73.
47:329		,	47·9 47·4	1	,,	,,,	79· 88·9
47.329		1	47.4	1	"	,,	99.9
			46.5	1	"	99	42604
	100	128.0	46.2	i	"	,,,	09.
	KI SECTION	1000	45.3	1	,,	,,	26.
43.684	43.68	2	43.6	1	,,	,,	55.2
43.255	43.25	2 2 0	43.3	2	"	,,	63.0
43.062	The Street				,,	,,	66.5
42.763	2 7	1	10.5	,	"	,,	71·9 75·4
42.573	1 2 2	0	42.5 41.6	1 2	"	"	93.
	AL THE REAL PROPERTY.	E WILLIAM EL	40.3	1	. ,,	12.8	42717

IRIDIUM-continued.

Ar	c Spectrum		Spark Spe	ectrum		tion to	
Wave-l	ength	Intensity	Wave length	Intensity	Vac	uum	Oscillation Frequency
Kayser	Exner and Haschek	and Character	Exner and Haschek	and Character	λ+	$\frac{1}{\lambda}$	in Vacuo
Briefine 1			2340.0	2	0.70	12.8	42722
000# 000			39.2	1	,,,	"	37.
2337.628	HO A SHEET	0	36.8	1	"	"	65.6
34.575	2334.57	1	34.5	1	"	"	81· 42821·6
34.406	200101	0	34.3	î	"	"	24.6
33.917	33.95	1	33.8	1	"	"	33.3
33.372	33.37	1			,,	,,	43.7
M HEED			32.7	1	,,	99	56.
			32.3	1	,,	,,,	63.
PER LA LA			31.8	1	"	"	73.
29.469			30.5	$\frac{1}{2}$	"	99	96.
29.409		0	29·5 29·0	1	"	,,,	42915.4
28.790		0	29.0	1	"	"	24· 27·9
28.598		0	THE REAL PROPERTY.		"	"	31.5
28.324		0			"	"	36.5
			28.1	1n	"	"	41.
28.046		0	I DESTRUCTION OF		"	"	41.7
			27.2	2	"	12.9	57.
			26.0	1	,,	,,	79.
SE III		100	25.8	1	,,,	,,	83.
			25.5	1	,,	,,	89.
25.029		1			,,	,,	97.3
24.754		0			,,	"	43002.4
24.006		0	24.1	1	"	"	16.2
			23·7 22·7	2	"	"	22· 40·
			22.3	1	0.69	"	48.
21.622	21.61	1	21.5	i		"	60.5
21.481	21.49	î	210		"	"	63.0
			20.0	1	"	"	91.
- Italian		1 2 2 2 2	18.3	1	"	"	43122
		A 18	17.4	2	,,	,,	39.
07			16.8	1	"	,,	50.
March Roll	15.46				99	,,	75.1
		4 12 14	14.9	4	,,	"	86.
	to the		14.1	1	"	13.0	43200
			12.5	1	"	"	30.
B. 197			12·0 11·6	1 1	"	"	40· 47·
			10.9	1	"	"	60.
			10.4	î	"	>>	70.
			10.1	î	"	"	75.
		700	09.6	î	"	"	84.
- 200		22 16	09.4	1	"	"	88.
	09.00	1	The state of the s	100	"	"	95.8
AND THE REAL PROPERTY.			08.8	1	"	,,	43300
Strawn .		0 8 8 8	06.7	1	,,	"	39.
CHI COL	05.54	1	05.5	ln	,,	"	60.8
B. 176 S. 1	04.20	2	04.6	ln	"	"	78.
	04.30	2	04.0	1	"	"	84.1
THE RESERVE TO SERVE			01.5	1	"	99	90· 43437·

IRIDIUM—continued.

A	arc Spectrum		Spark Spe	ectrum	Reduc		
Wave	-length	Intensity	Wave-length	Intensity	Vac	uum	Oscillation Frequency
Kayser	Exner and Haschek	and Character	Exner and Haschek	and Character	λ+	$\frac{1}{\lambda}$	in Vacuo
	444	1	2300.8	1	0.69	13.1	43450
	2300.11	1	00.5	1	"	"	56· 63·1
	2500 11	3477	2299.8	1	"	"	69.
			97.3	2	,,	"	43516
	0205 10	1 1 1 1	96.3	1	,,	,,	35.
	2295.19	1	95.2	1 1	"	"	56.3
		-	94·5 93·7	1	,,	"	69· 85·
		-	92.5	i	"	"	43607
			91.8	ī	"	"	21.
	On Section	1 - 1 - 3	91.0	4	"	,,	36.
		1200	89.5	2	,,	,,,	65.
		1 1	88.3	2 2	,,	13.2	87.
			87·0 85·7	1	"	"	43712
			84.6	i	"	"	37· 58·
		1001	81.7	2	"	99	43814
			81.2	2	"	,,,	23.
			80.6	2	,,	,,,	35.
			78.5	1	"	,,	75.
			77.7	1	0.68	,,	91.
			77·3 77·1	1	"	"	98· 43902·
			76.3	i	"	"	18.
			75.6	Î	"	13.3	31.
		The state of the s	72.5	ln	,,	"	91.
	Park Charles		71.4	2	,,	,,	44012
		LAB IS	68.9	2	,,	,,	61.
	9 12 18		68·5 68·1	2	,,	"	69.
	A LONG		67.8	1	"	"	76· 82·
		Par Par	65.3	2	"	"	44131
	64.73	1	64.7	ln	"	"	42.1
	400	-1176	63.0	ln	"	13.4	76.
	THE STATE OF		62.4	ln	,,	,,	87.
	1000	1 - 0 8 - 5	62.2	1	,,	"	91.
	59.00	1	59.3	2	"	,,	44248· 54·0
	99.00	- 5	58.8	1	"	"	58.
		7 8 7	58.4	2	"	"	66.
	1211	of the face of	57.5	2	,,	"	83.
		1-11-	57.1	2	,,	" "	91.
	THE ROLL	1 - 1 1	56.5	1	,,	"	44303
	1- 3 4	100 300	56.0	1	"	"	13.
	55.22	1	55·5 55·3	1	,,	"	28.2
	53.60	ln	30.3		"	"	60.0
	00 00		53.3	1	"	29	66.
	1 1 2 2	THE B	52.0	1	,,	"	92.
	1	The Contract of the	51.5	1	,,	99	44401
	4 2 3 3 4 4	THE WALL	50.7	1	,,	13.5	17.
	303 00		49.4	1	"	99	43.
	The state of the s	1 1 1 1 1 1	48.8	1	99	39	55.

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IRIDIUM-continued.

A	rc Spectrum		Spark Spe	ectrum	Reduc		
Wave-	length	Intensity	Wave-length	Intensity	Vacı	uum	Oscillation
Kayser	Exner and Haschek	and Character	Exner and . Haschek	and Character	λ+	$\frac{1}{\lambda}$	in Vacuo
		- THE REAL PROPERTY.	2247.7	1	0.68	13:5	44476
			46.7	2		ALIEN ALIE	96.
-3/24			45.5	9	,,	99	44520
			43.8	2	"	99	54.
	2242.80	2	42.6	4	,,	"	73.6
	2212 00		40.5	i	99	"	44610
			38.7	i	,,,	13.6	55.
			38.3	2	"		63.
	THE PARTY OF	-1100	38.1	ĩ	"	"	67.
		1324	37.1	2	"	,,	87.
			36.3	ı	"	"	44703
		PARTY STATE	34.3	î	"	,,	43.
	THE STREET	100	34.0	1	,,,	99	49.
	17/10/10/10	(EDITE:	33.2	î	. 99	"	65.
10 10 10 10 10 H	P. Spanish C.	THE STATE OF	32.0	î	"	"	89.
			24.2	î	0.67	13.7	44946
	The manual section is	The state of	20.6	În	The same of		45019
	EAR BEILD		19.3	1	,,	,,,	46.
			18.9	i	,,	"	54.
	ALLEY CO.		12.4	î	,,	13.8	45186
THE RESERVE	SINDER !		11.2	î	"	77000	45211
	PAR BANK		10.2	În	"	,,	31.
	ag to the bo		08.7	ln	>>	"	62.
	A THE REST AND		05.0	2	"	"	45338
			2197.5	ĩ	"	13.9	45492
			96.1	î	"		45521
William Bart		3700	92.2	i	,,	14.0	45602
			90.3	2	"		42.
		1 5 5	87.0	1	**	"	45711
	March 1988	TEXTS!	78.5	i	0.66	14.1	45889
	and or print	-car find	69.3	i		14.2	46184
		- Alberta	52.6	i	"	14.3	46441
		3-9-1	51.7	1	,,		61.
		THE REAL PROPERTY.	31.1	The second	"	"	01.

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OSMIUM.

Kayser, 'Abhandl. königl. Akad. Wissensch. Berlin,' 1897.

Exner and Haschek, 'Sitz. kais. Akad. Wissensch. Wien,' cv. p. 727 (1896), cvi. p. 53 (1897).

Rowland and Tatnall, 'Astroph. J.' ii. 186 (1895). Exner and Haschek, 'Wellenlängen-Tabellen der Bogenspektren der Elemente,' Leipzig und Wien, 1904.

Adeney, Photographs of Ultra-violet Spark Spectra, 'Trans. Roy. Dublin Soc.' (2), vii p. 331.

	Arc Specti	rum		Spark Spe	ectrum	Reduct		
1	Wave-length		Inten-	Wave- length	Inten- sity	Vacu	ium	Oscillation Frequency
Kayser	Rowland and Tatnall	Exner and Haschek	and Cha- racter	Exner and Haschek	and Cha- racter	λ+	$\frac{1}{\lambda}$	in Vacuo
5728.735	The state of the s		2		1 8	1.56	4.7	17451-2
5523.786			2	C (Trace)	CONTRACT	1.51	4.9	18098.6
02.789			3		B 70 B	1.50	5.0	67.6
5149.895			2		The state of the s	1.41	5.3	19412.7
03.670	A PER SER		2		W. Frank	1.40	5.4	19588.3
5031.988	1		1			1.38	,,	19867.5
4937.522			0		Maria I	1.35	5.6	20248.1
12.771			1			1.34	,,	20349.5
4899-386	WAS TO		0	TOUT BE DE		,,	,,	20405.1
65.759	The same	State - Line	2		P Beell	1.33	,,	20546.2
16.105	ASSESSED TO		2	THE RESERVE		1.32	5.7	20758.0
4794.177			5			1.31		20852.9
63.263			0	100		1.30	5.8	20983.8
55.332			1	Just to the	Bell	"	,,	21023.2
44.050			2		1 2 10	"	,,	73.2
38.508			2			,,	,,	97.9
38.215			1			,,	,,	99.2
			1 8 8 8 8	4696.8	ln	1.29	5.9	21285
4692-220		4692-20	2	92.2	ln	1.28	,,	21306.0
110000				70.6	ln	,,	"	21405
ATELONIE.			-	67.5	ln	,,	"	419.
Will Land			PAUL THE	64.1	1	,,	"	434.
63.977		63.99	3	The Carlo	-	"	,,	435.0
42.010			0			1.27	"	21536.5
34.930		34.94	1n			,,	6.0	569.3
32.000		32.01	4	32.0	1	,,	,,	582.9
16.948	4616.944	16.94	3	16.9	1	1.26	,,	21653.3
4597.321		4597.35	2	4597.3	ln	"	"	21745.7
95.206		95.22	ln	95.2	ln	,,	99	755·8 790·
			1	88.1	1	1.25	"	21831
				72.9	1		"	862
		10139-19	1	66.6	1	"	"	892
				57.7	ln	"	6.1	21935
			1 3 4	56.9	1	"		939
51.461	4551.463	51.50	4	51.5	2	"	"	964.8
50.584	50.571	50.59	8	50.58	8	"	"	969.1
48.836	48.827	48.85	3	48.8	1	"	"	977.5
40 030	10 021	10 00		46.2	In	"	"	990-
		C 1250	149	45.2	1	,,,	"	995.
40.093	40.087	40.10	2	40.1	î	1.24	"	22019-9
10 000	20 03.	-	1 30 1	37.8	i.	,,	"	031.
29.848	29.842	29.88	1 *	29.9	1	,,	"	069.7
25.035	25.035	25.03	1	25.1	1	,,	,,	093.2

OSMIUM-continued.

	Arc Spect	rum	250/4	Spark Spo	ectrum	2		
eller to					1	Reduc	tion to	
Mill one	Wave-length	- Santa	Inten- sity	Wave- length	Inten- sity			Oscillation
ALVA TITLE	Rowland	Exner	and		and		1_	Frequency in Vacuo
Kayser	and	and	Cha-	Exner and	Cha-	λ+	λ	
	Tatnall	Haschek	racter	Haschek	racter			
	NOTE OF			4523.5	1b	1.24	6.1	22101
			1 1 2	20.06	10	22	,,,	14.6
				20.5	1	,,,	22	15.
4519.050		NAME OF THE PARTY	0	20·2 19·1	1	"	23	17· 22·4
14.445			0	101		"	• • • • • • • • • • • • • • • • • • • •	45.0
11110				11.0	1b	"	"	62.
07.590			0	2.000		"	"	78.7
03.474			0		Wile I	1.23	,,	99.0
			1216	01.1	1	"	"	22211
		1	1 1 1 1	4490.3	ln	,,	6.2	64.
4488.771	4488.766	4488.75	1	88.7	1	"	"	71.7
84.935	84.930	84.94	3	84.9	2	, ,,	"	90.7
70.074	MO.OMC	70.00	0	84.3	1	"	"	94.
79·974 66·134		79.98	2	80·0 66·2	l ln	1.22	"	22315·4 84·6
62.473	62.470	1 3250 167	i	62.5	1		"	22402.9
59.790		59.80	1	020	- Carlo	"	"	16.4
59.646		59.68	î	59.7	2	"	22	17.0
00 010		00 00		58.5	ī	"	"	23.
47.535	47.520	47.52	4	47.5	2	22	"	78.3
45.854	45.850		1	45.8	1	. ,,	,,	86.7
45.582	A STATE OF THE PARTY OF THE PAR		1			27 .	,,	88.0
39.808	39.810	39.80	2	39.8	1	,,	,,,	22517.3
37.258	37.257	37.26	1	37.3	1	,,	,,	30.2
36.490	36.488	36.48	5	36.5	2	,,	"	34.2
32.584	32.582	32.59	3	36·0 32·6	1 2	"	"	37· 54·0
28.059	32'082	32.39	1	32.0	4	"	6.3	77.0
20 000	The same		1	24.7	1b	1.21		94.
				23.7	1	,,	"	99.
20.639	20.633	20.64	12	20.66	10	,,	,,	22614.9
11.298		11.30	1			"	"	62.8
10.899			1	05.0	1	,,,	"	64.8
04.375	04.378	04.40	2	04.3	1	,,	"	98.3
02.901	02.904	02.92	3	00 1	H. M.	,,	"	22706.0
00.751	00.747	00.75	2	00.7	ln	"	"	17.1
4397·424 95·040	4397.427	4397.45	8	4397·5 95·08	2 8	"	"	34·2 46·6
91.251	95·042 91·242	95·05 91·30	2	91.3	2	1.20	"	66.2
90.406	31 242	31 30	0	31 3	-	100000	"	70.6
00 400			0	90.0	1n	"	"	73.
86.485	Text Binner		1	86.5	1	"	6.4	90.9
85.068	P. S. S. S.		ō	85.1	ln	"	,,	98.3
77.070	77.068	77.05	ln	77.0	1	,,	,,	22840.0
70.826	70.824	70.84	3	70.8	2	,,	,,	72.6
65.835	65.837	65.85	5	65.83	4	,,	,,,	98.7
61.126		W	0	61.2	ln	"	,,	22923.5
58.318	58.304	58.31	1	58.3"	2n	"	"	22938.3
58.157	58.153	58.16	1	500	1	1.10	"	39.1
54.691	54.000	54.64	1	56·6 54·6	1 1	1.19	"	47.6
54.631	54.626	54.64	1	53.7	1	"	"	57·6 63·
						99	99	

S

OSMIUM—continued.

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4 1	ion to	Reducti	ctrum	Spark Spe		um	Arc Spectr	
Oscillatio	um	Vacu	Inten-	Wave-	Inten-	100000	Vave-length	T
				length			A We-length	A CONTRACTOR OF THE PARTY OF TH
Frequenc in Vacuo	- WE !		sity and		sity	Euman	Danie d	7
III vacuo	1_	11	Cha-	Ewner and	Cha-	Exner	Rowland	77
Fire State	λ	λ+	racter	Exner and Haschek	racter	and Haschek	and Tatnall	Kayser
			Tactor	Hascher	Tacter	naschek	Tathan	
23000	6.4	1.19			1	4345.75		THE PARTY OF
09.	,,	,,			1	44.83		ALL I
20.8	,,	,,			2	42.70	4342.678	4342.681
40.8	,,	,,	2	4338.9	3	38.91	38.919	38-913
71.7	,,	,,			1	33.11		Tellan Day
94.5	,,	"	6	28.83	5	28.85	28.840	28.838
23107.4	,,	,,	2	26.4	4	26.41	26.416	26.413
26.	,,	"	1	22.9		+	2/4	
44.4	,,			A STATE OF	2	19.50	19.502	19.513
51.7	"	1.18	L. ST. T		ln	18.15	10002	10 010
53.8			7/4	THE STATE OF	1	17.73	17.743	17.754
83.	"	"	1	12.4		11 13	17 740	17 104
87.0		"	8	11.55	7	11.57	11.560	11.561
23200.6	"	"	1	09.1	3	09.05	09.041	09.041
07.	6.5	"	1	07.9	3	09 00	09.041	09.041
19.9		"	1	05.5	1	05.45	05.440	
49.	"	"			1	09.49	05.440	
50.1	"	"	1	00.0"	8, 8	4000.00	1000 050	1000 000
	"	19		1000 6	1	4299.87	4299.856	4299.870
57.	"	"	ln	4298.6		0= =0		
62.6	,,	"	ln	97.6	1	97.56	97.538	97.556
68.9	"	99	1	96.4	3	96.40	96.383	96.381
81.2	,,	99	10	94.05	10	94.14	94.113	94.105
86.7	,,	"	ln	93.1	1	93.10		
93.	,,	,,	ln	92.0	190			
23313.7	,,	,,	AST I	小花 点是上	1	88.13		
25.0	,,	,,	2	86.1	3	86.05	86.056	86.056
33.8	,,	,,	ln	84.6	1	84.44		
49.6	,,	,,	1	81.5	1	81.54	81.529	81.535
72.7	,,	1.17	1	77.4	2	77.30	77.302	77.315
84.9	"	,,	1	75.2	2n	75.10	75.064	75.074
90.5	,,	,,			-1.29			73.984
23402	,,	,,	1	72.0	1 333			
07:5	,,	,,	1	71.0	2	70.95	70.945	70.952
13.	,,	,,	1	69.9	13827			.0002
13.9	,,	"	i	69.7	3	69.78	69.767	69.767
15:3	,,	"	THE REAL PROPERTY.	1000	2	69.53	69.521	69.526
40.	"	"	2	65.0	3	64.91	64.903	64.893
42.	"	"	ĩ	64.6	0	01 01	04 000	04.000
62.1	,,		10	60.98	15	61.01	60.993	61.011
23507.8	6.6	"	1	52.7	2	52.73	52.690	
15:		"	ln	51.4	2	51.40		52.718
35.	79	,,	111	314	ln ln		51.331	51.321
59.	,,	1.16	THE SE			47.69	Tools and the	Share and
68.9	39	W = 0 - 13			ln	43.32	41 000	47 000
93.	"	"	2	99.6	2	41.70	41.679	41.682
23613	"	"	2	33.6	1	37.31	00.010	00.000
23013	99	"			4	33.65	33.613	33.630
	"	"	1 1 2 1	A PARTY	1	32.20		
36.	"	"		1-12-12-14	1	29.51	3-14	29.531
52.	22	"			2	26.72	26.675	
91.	"	"	ln	19.9	1	19.84	1	
95.	,,	,,	ln	19.0	1	19.02	18.991	19.005
23716	,,,	,,	1	15.4	3	15.33	CALL THE PARTY	
23.	"	,,	2	14.0	4	14.06	The state of	
34.	1 19		10	12.02	15	12.06	12.007	12.028

OSMIUM-continued.

	Arc Spect	rum		Spark Sp	ectrum			
					-	Reduc Vac	tion to uum	
	Wave-length		Inten-	Wave- length	Inten-			Oscillation
	Rowland	Exner	sity	lengun	sity			Frequency in Vacuo
Kayser	and	and	Cha-	Exner and	Cha-	λ+	1	In vacuo
Hayser	Tatnall	Haschek	racter	Haschek	racter	^'	λ	
Tabata A				4208.1	ln	1.16	6.6	23757
如料表面		4205.40	2	05.4	ln	1.15	,,	72.3
THE RESERVE		04.76	2	04.8	1n	,,	,,	76.0
		02.25	5		11-10-1	,,	,,	90.2
4201.541	4201.528	01.59	4	01.5	2	,,		94.1
	A H sale its	4195.31	2	4195.4	1	,,	6.7	23829.4
		94.37	1	94.5	1	,,	,,	34.8
		93.06	1	93.0	ln	,,	,,	42.2
		92.80	2			"	,,	43.7
1100 040		92.35	2	92.5	1	"	"	46.3
4190.059	4190.052	90.07	5	90.1	2	"	"	59.3
		86.50	1	N. Bond of	STATE OF	"	"	79.6
		85.18	1	04.4		"	"	87.1
		84.30	3 2	84.4	2	"	"	92.2
		82.64	2	82·6 80·4	ln ln	"	"	14.
75.783	75.781	75.78	6	75.78	8	**	"	40.9
10 100	10 101	74.77	1	75.0	1	"	"	46.7
73.391	73.386	73.40	8	73.35	8	"	"	54.6
72.708	72.710	72.71	8	72.7	2	,,	,,,	58.6
		70.97	1				"	68.5
				66.5	1	1.14	"	94.
	TANK TO THE REAL PROPERTY.	12311131	3 ml/s	66.0	1	"	,,	97.
FINE COLL	A SECURITION OF THE PERSON OF			65.0	1	,,	,,	24003
B. WEIGH		61.09	1	61.1	1	,,,	,,	25.5
		60.45	2n	60.5	1	,,,	,,	29.2
		60.15	2	60.2	1	>>	,,	30.9
	58.948	58.98	3	59.0	2	"	,,	37.7
		53.80	1 2	4 5 5		"	,,	67.6
		53·53 52·79	1			"	"	73.5
52.448	52.455	. 52 19	5			"	"	75.5
52 110	02 400	50.90	2	51.0	1	"	"	84.5
				48.4	i	"	"	99.0
Marie Sona A		47.50	2	47.5	î .	,,	6.8	24104.1
Charles and a	State of the last	44.74	ī		ST-38 TH	,,	,,	20.2
Jag Burg		43.33	1	38.9	1	,,	"	28.4
38.021	38.013	38.00	4	38.0	2	,,	"	59.4
35.955	35.945	35.96	16	35.93	10	,,	"	71.4
	-0 10 10	35.20	2	35.0	1	"	"	75.8
97-11	The state of the s	91.00		32.3	1b	,,	"	93.
29.114	29.124	31.20	2 3	31.2	1b 2	1,19	"	99.2
40 114	20 124	29.12	0	29·2 29·1	1 Rh ?	1.13	"	12.
The state of the s	alt out !	27.45	1	27.5	1	"	"	21.2
Ballot Styl		26.26	1	26.2	1	"	"	28.2
Circum William	THE REAL PROPERTY.	25.44	i	25.5	î	"	"	33.0
24.760	24.762	24.76	3	24.8	2	"	"	37.0
		16.71	ln	THE PARTY OF	of or L	"	,,	84.4
		16.40	ln	15.0	1b	,,	,,	86.3
12.177	12.185	12.19	12	12.12	8	"	,,	24311-2
	DATE OF THE PARTY	11.19	2	00.0		,,-	,,	17.1
	ACTUAL DESIGNATION OF THE PARTY	09.22	1	09.3	ln	, 22	"	28.7
AND DESCRIPTION OF THE PARTY OF	THE R P. LEWIS CO., LANSING	08.14	2	08.0	l ln	>>	,,	35.1

OSMIUM -continued.

	Arc Spect	rum		Spark Spe	ectrum	Reduct		
	Wave-length		Inten-	Wave-	Inten-	Vacu	lum	Oscillation
	1410 10119111		sity	length	sity			Frequency
	Rowland	Exner	and	6	and		The state of	in Vacuo
Kayser	and	and	Cha-	Exner and	Cha-	λ+	1_	111 (4000)
1200 501	Tatnall	Haschek	racter	Haschek	racter		λ	
Hamus .				4106.3	1	1.13	6.8	24346
1.46	1 43.4	4105.60	2	The Real Property lies		,,	,,	50.2
Treve was	Treate la	03.80	3	00.5	2	,,,	,,	60.9
4100.436	4100.446	00.46	3		12000	"	22	80.8
4098.233	4098.264	4098-29	3	4098.3	1	,,	6.9	93.7
97.087	97.090		2	Principal Co		"	,,	24400.8
AGE TO SE	97.004		2		7	,,	"	00.8
THE HELP		96.26	1	17/11/11		,,	29	05.6
91.980	91.977	91.99	6	91.98	4	1.12	,,	31.1
0.81 - 75		91.18	ln	also Mail		,,	,,	35.9
A COLUMN	90.922	90.99	ln	91.0	1	"	"	37.3
88.598	88.593	88.58	3	88.6	1	,,	,,	51.4
Take .	-		1-1-1	84.8	In	,,	,,	84.
5-80 E		76.85	. 1		DESTRUCTION OF	"	,,	24521.8
		75.02	1			99	,,	32.9
74.829	74.834	74.83	4	74.9	2	,,	,,	34.0
73.768	73.763	73.78	4	73.8	1	"	,,	40.4
The second	71.716	71.71	3	71.7	1	,,,	,,	52.8
71.169	71.162	71.15	2n	71.2	2	,,	,,	56.1
.71.020	71.008	71.01	4		-177	,,,	,,	57.0
66.862	66.848	66.85	10	66.82	10	,,	,,	82.1
66.460	66.464	66.47	2	Elever 1		,,	- ,,	84.5
- STORTER			1	62.8	ln	"	"	24607
10000		61.78		No. 10 Person		,,	,,,	12.8
		60.85	1	60.9	1	79	,,,	18.5
7 10 10		56.49	ln	The Carlo	THE STATE OF	,,	,,	44.9
55.859			0		1000	,,	,,	48.8
55.646	55.641	55.65	2	55.6	1	,,,	79	50.1
No the		53.96	ln	53.9	1	1.11	,,	60.3
53.417	53.407	53.40	1	53.4	1	,,	,,	63.7
51.584	51.580	51.59	2	51.6	1	,,	,,	84.8
		50.72	1	50.7	1	,,	7.0	80.0
			The same	50.3	1	,,,	,,	83.
48.216	48.197	48.20	3	48.3	1	,,	,,,	95.3
		42.95	1		the state of	,,	,,	24727.4
42.081	42.073	42.09	4	42.1	2	,,	,,	33.2
Este de la constitución de la co			9999	39.6	1	29	,,,	48.
38.813			0		1	,,	,,	52.7
38.809		38.80	1	38.8	1	,,	,,	52.8
WATE LIVE	38.782		2		1 1 1 1	,,	,,	52.9
74	38.017	38.00	2	37.9	1	,,	,,	57.7
36.640	36.634	36.61	1	36.6	1	,,	,,	66.1
35.249	35.250	35.26	1	35.3	1	,,	,,	74.6
-48	33.095	33.12	1 Ga ?	33.0	1	,,,	,,	87.8
	- 3	The state of the s		30.8	ln	,,	,,	24802
500	THE RESERVE		-0.5	29.7	In	,,	,,	09.
1000 - 911	S COLUMN		1,0000	24.0	ln	"	"	44.
Charles of the			836	22.9	1n	"	,,	51.
A STATE OF THE PARTY OF		20.56	1	20.6	ln	"	,,	65.2
18.425	18.430	18.38	4	18.4	2	,,	,,	78.5
15.203	15.211	15.18	2	15.2	1	1.10	,,	98.4
030000			to de State	15.1	1	,,	,,	99.
华州生 1		12.60	1 Ti?	12.6	1b	,,	,,	24914
THE RESERVE		11.14	1	11.0	1	,,	,,	23.6

OSMIUM-continued.

	sion to	Reduct	ctrum	Spark Spe		rum	Arc Spect	
Oscillatio	ıum	Vacu	Inten-	Wave- length	Inten- sity	13.00	Vave-length	
Frequence in Vacue	1/2	λ+	and Cha-	Exner and	and Cha-	Exner	Rowland	Kayser
	λ	^+	racter	Haschek	racter	Haschek	Tatnall	Rayser
24959-9	7.0	1.10			5	4005.29	4005:327	1001
66.8	7.1	,,,	2	4004.2	3	04.18	04.193	4004.184
70.1	7.1	"	2	03.6	4	03.64	03.652	03.652
83.5	,,	"	1b	01.4	1 2	01.50	2000.100	2000.110
98·5 25004·	,,	"	ln	3999·2 98·2	2	3999.10	3999.103	3999.110
11.8	"	"	111	30 2	2	96.99	96.972	96.979
12.3	,,	"			2	95.10	95.096	95.103
32.9	"	"	A-Miles		2	91.66	91.640	00 100
63.2	"	"			ĩ	88.76	88.783	88.785
66.0	"	,,	1	88.3	2	88.32	88:343	88.340
83.2	"	"	î	85.6		00 02	00,040	00 010
25121.5	"	"	În	79.5	1	79.53	79.521	79.524
35.0		"	4	77.33	10	77.39	77:391	77.389
46.4	"	1.09	i	75.5	3	75.59	75.598	75.596
56.5	"	,,	Marie .		1	74.00	., .,	
72.	"	,,	1	71.5				Show His Prince
72.	"	,,	1	71.6	San L			
83.1	"	,,	1	69.8	4	69.82	69.835	69.832
25203	,,	"	1	66.6	8			AND THE
12.9	"	,,	1	65.1	3	65.08	65.112	65.106
21.3	,,	,,	6	63.80	10	63.80	63.777	63.774
23.3	,,	"	aks de		1	63.48		
38.0	,,	,,	2	61.2			61.163	61.159
41.3	,, .	,,	1	60.6	3	60.65	60.653	60.656
58.	,,	,,	1	58.0				STATE OF THE STATE
59.5		99	门身作。	-	ln	57.80		
73.9	7.2	,,			2	55.53	Service and	
79.0	,,	,,	STORY .		1n	54.72		ETYLINE SI
87.	,,	,,	1	53.5	The state of			
90.6	"	,,,	1	53.0	2	52.91	52.911	52.904
25309.7	,,	,,	1	49.9	3	49.93	49.921	49.925
14.	"	,,	ln	49.3	BETTO.	10.00		1000
72.2	"	"		00 =	1	40.20	00 500	00 -04
75.4	"	"	1	39.7	3	39.71	39.708	39.704
81.6	99	1.08	2	38.7	1	38.74	38.739	38.739
95.	99		1 1b	36.6	1	95.07		
25401.4	"	"	1	35·7 31·7	2	35·67 31·70	21.000	31.660
27.3	"	"	1	30.1	4	30.14	31·660 30·138	30.148
37.2	"	"	ln	28.6	3	28.68	28.681	28.691
46.6	"	"	ın	20.0	2	28.57		28.557
49.0	"	"	Saula S		ĩ	28.31	28.554	20 001
54.9	"	"	233		î	27.40		
58.0	"	"	1	26.9	2	26.93	26.916	26.923
68.9	"	"	i	25.2	2	25.25	25.244	25.253
89.0	,,	- 0	î	22.2	2	22.15	NO NII	20 200
96.5	"	"	i	21.0	2	21.00	E PROVINCE	STUFF CONTRACTOR
25508.9	"	"	1 1 1 1	-10	ĩ	19.09	19.107	4
10.4	"	"			2	18.85	18.888	STEELS !
32.0	"	"	(LEED)	The Total	õ	2000	10 000	15.543
55.5	"	"	100000	PU-Up Co	2	11.95		25 010
64.		"	1	10.7	J. St.		The best of the	125
82.7	7.3	"	1200	THE PARTY OF	1	07.78		STREET ST

OSMIUM—continued.

	Arc Spect	rum		Spark Spe	ectrum	Reduc	tion to	
	Wave-length		Inten- sity	Wave- length	Inten- sity	Vacı	uum	Oscillation
Kayser	Rowland and Tatnall	Exner and Haschek	and Cha- racter	Exner and Haschek	and Cha- racter	λ+	$\frac{1}{\lambda}$	Frequency in Vacuo
BURGARA &	Tay Lofe	3906.28	1	3906-2	1b	1.08	7.3	25592.5
		05.65	1 Si ?			,,	,,	96.6
			The same of	05.2	1b	,,	,,	25600
				03.2	1b	,,	"	13.
9001 071	9001 049	01.05	_	•02.0	1b	,,	,,	21.
3901.851	3901.843	01.87	5 2	01.8	2	"	"	21.5
00.541	00.527	01.16"	4	01.1	1	"	"	26·1 30·2
00.941	00.321	00·54 3899·18	1	00.5	1	"	"	39.1
		97.30	1			"	"	51.5
3895.331	3895.305	95.34	2	3895.3	1	1.07	"	64.5
9090 991	95.023	95.05	1	95.0	2	100000	"	66.4
	30 023	94.83	i	300		"	"	67.8
		93.40	În	92.1	1b	"	"	77.2
		92.99	1	021	1.0	"	"	79.9
		91.75	î			,,	,,	88.1
		88.97	i	1 1 1 1		"	"	25706.5
		86.91	2	86.9	1	,,	,,	20.1
		85.90	2	85.9	1	,,	,,	26.8
		84.75	1			"	"	34.4
		Strate Contract	15-70	83.5	1n	,,	,,	43.
		82.02	4	82.0	2	"	,,	52.5
		80.93	2	80.9	1	,,	99	59.7
		78.65	3			,,	,,	74.9
	•	78.05	3	The state of		,,	,,	78.9
		77.45	2	77.5	1	,,	,,	82.8
	76.971	76.91	8	76.95	4	,,	,,	86.2
		75.82	ln		19798	. ,,	"	93.7
		75.26	1	HI SECTION	Blatte	,,,	,,	97.4
	-	- 7 - 35 10		74.2	ln	,,	"	25804
	The state of the s	73.86	2	73.8	ln	99	"	06.7
		73.17	1			"	"	11.3
		00.15	0	71.1	1	"	9.9	25.
		69.15	1	60.0	1	"	,,,	38.2
	THE STATE OF	68.83	2 2	68.8	1	"	,,	40·3 54·9
	10/ 2/8/02	66.65	1	State St		"	,,	58.0
		65.59	6		H 2 45 -	"	"	62.0
	40 60 15	65.19	2			"	"	64.7
		00 10	2	62.7	1b	"	"	81.
		60.95	1	021	10	l. I de la	,,	93.1
	- 50-50	30 00	-	59.8	1	"	"	25901
	The state of	57.24	10	57.2	2	,,	"	18.0
		54.86	2	54.8	1	1.06	"	34.0
	TE TEXT	53.75	2n	The state of the	285	"	,,	41.4
	13.12-3	53.60	3	53.6	1	,,,	,,	42.5
		50.11	10	HARRY D	CT-CT	,,,	,,	66.0
		48.94	1	49.0	1	,,	,,	73.9
	7.333	47.71	1	100000	TO BE	,,	,,	82.2
	7.4	WEST SANE	111111111111111111111111111111111111111	47.4	1	"	"	84.
	TABLE TO SERVICE	47.01	1			,,	"	86.9
	w 400 To 10	46.55	2	46.6	ln	,,	,,	90.0
		45.81	1	1	1	,,	,,	95.0
	Land Co.	44.95	1	1 10 00		,,	25	26000.8

OSMIUM—continued.

o altan	Arc Spect	Lum	1	Spark Spe	ectrum		tion to	
7	Vave-length		Inten-	Wave-	Inten-	- 200		Oscillation
-			sity	length	sity	1.111		Frequenc
milk etc.	Rowland	Exner	and	-	and	10.5	1	in Vacuo
Kayser	and	and	Cha-	Exner and	Cha-	λ+	$\frac{1}{\lambda}$	2702
	Tatnall	Haschek	racter	Haschek	racter		^	
delinter.	ayie in	3843.77	3	3843.7	1	1.06	7.3	26008.8
ELE		42.40	1		webp.	,,	"	18.1
18.1.21		41.80	1	The state of the s		,,,	"	. 22.2
		41.41	5	41.4	2	. ,,	"	24.8
		40.44	10	40.4	2	,,,	,,	31.4
		36.18	10	36.2	2	,,	,,	60.3
	No The		Title bit	32.5	1	,,	,,	85.
THE TOTAL	BE ALLE	32.33	2	32.3	1 Pd?	,,	,,	86.5
	201-11	31.55	1		BARRY S	,,	,,	91.8
THE REAL PROPERTY.	Marin and	30.26	1	STATE OF STATE	1355	,,,	,,	26100.6
1	SIZ TON	29.20	1		THE TANK	,,	,,	07.8
13 1	the state of	27.30	3	27.2	1	,,	"	20.8
96	SPILE	26.78	2	26.7	1	,,	"	24.3
100			The state of	26.5	1	,,	,,,	26.2
製まる	TREE L	23.47	1		MARKS.	**	"	47.0
	METALVINE VI	22.06	2	22.1	ln	,,	,,	56.6
3000	Lety A	21.80	2	21.8	ln	"	,,	58.4
		18.80	2 Pt ?	The second second	THE TANK	"	,,	78.9
	TOE VIEW			18.7	1	,,	,,	80.
	THE RESERVE	18.21	2		11197	"	7.4	82.9
			10000	18.0	1b	,,	,,	84.
		17.78	2			,,	"	85.8
	- TE - (1)	14.42	2	14.4	1	1.05	,,,	26208.9
No.		14.20	1		STATE OF	,,	,,	10.4
		12.45	2	12.4	1	"	,,	22.5
8			39.8	11.1	1	,,	,,	32.
	SIT VIVE	10.59	1	10.6	1	,,	,,	35.3
11/5-15		09.80	1	09.7	1	"	,,	40.7
a pitient	THE RESERVE			07.8	1	99	"	54.
2 . 17	2-7-11	04.27	1		200	,,,	,,,	78.9
	10	02.77	2	02.7	1	"	,,	89.2
100		01.75	2	01.7	1	"	"	96.3
		01.40	ln		nga	,,	,,	98.7
	A CONTRACT	01.23	1	102	and a	"	"	99.9
MARIE S		00.90	1	00.0		"	,,	26302.2
	A VIEW NA	00.58	3	00.6	1	,,	"	04.4
	d	00.06	1	de Gertie		"	>>	08.0
	STAVE &	3797.86	1	00070	77	99	22 .	23.2
5.3/5	A MENTER OF	95.83	3	3795.8	1	"	"	37.3
-				95.2	1	"	"	42.
	0=04.07	94.84	3	94.9	1	>>	"	44.2
17 E 2	3794.054	94.08	10	94.1	4	"	,,	49.5
45 V 1 X		00.10		94.02	4	"	"	49.9
E Wenn	THE TOTAL	92.18	1		All Parks	99	**	62.7
		91.23	1	00.0	0	99	"	69.3
	00.044	90.90	4	90.9	2	"	,,	71.6
THE REAL PROPERTY.	90.244	90.29	6	90.26	4	"	"	76.0
	171	89.25	3	89.2	1	"	"	83.0
		89.04	1	001	1	,,	"	84.5
Mile-m	BUK HONE	86.14	1 Ti?	86.1	_	"	99	26404.7
Marie C		85.88	1	85.8	ln	"	99	06.5
		85.82	1	04.0	1	"	99	07.0
			I The same of the	84.6	1	>>	99	15.

OSMIUM-continued.

	Arc Spect	rum	July 1	Spark Sp	ectrum	Reduc		
Territoria V	Wave-length		Inten-	Wave- length	Inten-	Vacu	lum	Oscillation
	Rowland	Exner	sity	Tengun	sity			Frequency in Vacuo
Kayser	and	and	Cha-	Exner and	~.	λ+	1	III Vacuo
1kwy ser	Tatnall	Haschek	racter	Haschek	racter	N Bel	$\frac{1}{\lambda}$	
BEALD A		3783.82	2	3783.8	1	1.05	7.4	26420.9
TIRE STATE		82.90	1	PICT.	Desert St. II	,,	,,	27.4
		82.34	20	82.34	8	,,,	,,	31.3
No. of Street, or other Party of the Party o		81.99	ln			,,,	,,	33.7
THE REAL PROPERTY.		80.74	1	80.7	1	,,	,,,	42.5
		80.37	2	80.3	1	"	"	45.0
~				79.6	1	22	,,	50.
		77.13	5	77.1	1	"	"	67.7
		76.40	3	76.4	1	1.04	"	72.8
The state of the s		76.16	1	76.2	1	27	"	74.5
		76.10	3	74.7	1	"	"	75·0 84·3
and the second		74·77 74·55	3	74.5	1	"	"	85.8
W 85		74.30	1	14.5	1	"	"	87.6
		73.95	2		1	, ",	"	90.0
		72.09	2	72.0	1	"	7.5	26503.0
100		71.78	2	71.7	î	"		05.2
9-17 J	3771.040	71.00	2	71.1	lb	"	"	10.7
100	0111 010	70.48	ī		10	"	,,	14.3
aven -		69.44	1	NOTE IN	10000	,,	,,,	21.6
- Valence Control		68.27	4	68.3	1	,,	,,	29.9
SAULE IN		66.43	4	66.4	1	"	"	42.8
gue Str.		64.83	1	64.8	ln	,,	,,	54.1
- Fally			X R 3	64.1	1	,,	,,	59.
Medie Sil			1000	60.9	1	,,	,,	82.
		60.40	2	60.4	1	,,	,,	85.4
		58.25	1		1	,,,	,,	26600.6
		57.21	3	57.2	1	,,	"	08.0
		56.91	1		1	"	,,	10.1
		F0 F0	- 20	56.8	1	"	"	11.
		56.70	1			"	"	11.6
		54.65	ln	54.6	2	>>	"	26.1
AVER LESS		53.99	20	1 70.00	10	"	"	30·8 40·1
A. Carrier I		52·69″ 52·06	20	52·68 52·1	10	"	"	44.5
		52 00	-	51.9	1	"	"	46.
There was		51.45	2	51.4	1	"	"	48.8
See 1		50.95	2	31 7	1	"	"	52.4
CELEBOX II FE		50.72	2	1000	E. mil	"	,,	54.0
THE STREET		49.99	1	ELVERA	I WITH	,,	,,	59.2
The state of		49.18	2	1 - 3 5	18 10 1	,,	,,	65.0
		A STATE OF	WHEN	48.4	1	,,	,,	71.
		47.18	1	18 34		,,,	,,	79.2
3746-612		46.60	4	46.5	2	,,	,,	83.3
PARTY BAR		44.52	1		-	,,	,,	98.2
		44.00	1	1000	The last	,,	,,	26701.9
3.7		43.80	1 2	41.7	1	"	,,	03.3
200	10	41.66 41.22	2 2	41.7	ln 1	"	"	21.7
Tracin !		40.39	1	41.2	1	"	,,	27.7
300		40.39	i		HA HA	"	"	29.0
THE STATE OF		.10 20		37.1	1	1.03	"	51.
-86 - 8		35.66	2	35.6"	1	,,	"	61.5
100	H. Fred Land	35.36	1	30 0		"	"	63.7

OSMIUM—continued.

	Arc Speci	trum		Spark Sp	ectrum	Redu	ction to	
Service 1	Wave-length		Inten-	Wave-	Inten-	Vac	euum	Oscillation
	1	1	sity	length	sity	1000		Frequency
	Rowland	Exner	and	1000	and		1	in Vacuo
Kayser	and	and	Cha-	Exner and	Cha-	λ+	λ-	
	Tatnall	Haschek	racter	Haschek	racter		1	
		3734.70	1			1.03	7.5	26768.4
		33.50	1			,,	,,,	77.0
		32.99	1	3732.9	ln	,,	,,,	80.7
		31.95	2	31.9	1	,,	,,,	88.1
		30.88	3	30.9	1	,,,	,,	95.8
		29.37	3	and the second		,,	,,	26806.7
		28.85	1	00 ×	100	,,	"	10.4
		28.52	2	28.5	1	, ,,	"	12.8
PER STATE OF THE PER ST		26·13 25·45	1	95.4		"	7.6	29.9
BENGE ST		22.11	2 2	25.4	1	"	"	34.8
		20.27	10	22.1	1	"	"	58.9
000		20.21	10	20.3	2	,,	"	72.2
Mary		19.64	10	20·1 19·6	2 2	"	,,	73.
1 14 14		18.87	10	19.0	Z	"	•,	76.7
Rep. Cods		18.49	3	18.5	1	"	"	82.3
		18.06	2	18.1	i	2,9	"	85.0
		17.54	ĩ	10 1	1	"	"	88.1
		17.00	î	The Real Co.	10000	"	"	91.9
		16.48	2	55 40 70		"	"	95·8 99·6
		16.38	3	16.4	1n	"	"	26900.2
		4174	100	15.2	1b	,,	"	09.
		14.13	2n			"	"	16.6
ME I	The same of	13.88	4	13.9	2	"	"	18.4
5 - F - F - F - F - F - F - F - F - F -		12.99	2			22	"	24.9
SUR THE		12.60	2	- 3 3 3		"	",	27.7
		Maria Sala	S. M.F.	11.9	1	. ,,	,,	32.8
50 74		09.30	5			,,	,,	51.7
10000		06.72	4	06.6	2	,,	,,	70.4
709.901		00.40		04.2	1	,,	,,	89.
3703.391		03.40	4	03.4	2	,,	,,	94.6
REALT		02.95	2			"	,,	97.9
THE STATE OF		01.75	2	01.0	No. of	"	,,	27006.6
THE THE		01.45	X 088	01.6	1	,,	**	08.
00.688	TOTAL TOTAL	01.45	1	01.4	1	,,	"	08.8
30 000	37 1 3 1 4	00.45	$\begin{array}{c c} 1 \\ 2 \end{array}$	00.4	1	"	"	14.4
	70	3698-98	2	3698.9	1	"	"	16.1
SE PE	EST TOWNS	3030 30	4	95.9	ln	1.02	"	26.9
39	\$11.00 h	95.80	1	30 3	III		"	49.
	The state of	95.35	î	95.4	ln	"	"	50.1
227	WITH THE PARTY	94.53	î	1 2 6	***	"	"	59.4
MARKET STATE	PARAMETER STATE	TO THE STATE OF	N EV.	94.4	ln	"	"	60.
The state of	The latest	TES BE		93.8	ln	"	"	65.
3	MENTON:	93.15	1	10 300	1000	"	"	69.5
Martin II	ST BIRLY	92.80	1	92.75	4	"	"	72.1
003 577	787 78 316	92.41	1	到 建基丙基	100	"	,,	75.0
691.750			0	15 5 3		"	,,	79.8
19		90.88	2		M. M. M. M.	"	"	86.2
00.101	12 Ha	00.00	1	89.5	1	"	"	96.
89.191		89.21	5	89.1	2	"	,,	98.5
In the		88.05	1			"	"	27107.0
THE STATE OF	THE PARTY	87.40	1	0	127	,,	,,	11.8
		87.19	1	87.1	1	,,	,,	13.3

OSMIUM-continued.

	Arc Spec	trum		Spark Spe	ectrum		tion to	
	Wave-length		Inten- sity	Wave- length	Inten- sity	Vacuum		Oscillation Frequency
Kayser	Rowland and Tatnall	Exner and Haschek	and Cha- racter	Exner and Haschek	and Cha- racter	λ+	$\frac{1}{\lambda}$	in Vacuo
				3686.2	1	1.02	7.6	27121
		3685.55	1	00002		,,	,,	25.4
		84.70	2	- C-04, SIC		"	"	31.6
				84.5	1	,,	,,	33.
		84.00	1	84.2	1	,,	AL BOUL	36.8
3681.705		81.74	3	81.7	1	"	7.7	53.5
		78.40	1	78.2		"	"	78.0
75.599		78·15 75·60	2 4	75.5	1	"	"	79·9 98·7
19.999	A STATE OF THE STA	74.67	1	100	-	"	:>	27205.6
	of the second	1201	3	73.3	1b	"	"	16.
and had	45 4 3 4 3 5 B	73.01	1			,,	"	17.9
				72.1	1	,,	"	25.
		71.60	1			,,	,,	28.4
71.040	3671.040	71.05	6	71.1	2	. "	,,	32.5
		69.85	1		NAS.	,,	,,	41.4
		69.63	1		G. T.	"	,,	43·0 45·8
		69·25 68·34	1	68.4	2	"	"	52.6
		66.48	4	66.4	2	"	"	66.4
		00 40	-	65.1	2	"	"	77.
		61.40	2	61.4	ī	"	"	27304.3
		60.92	1		200	1.01	,,	07.8
			m poil	59.8	ln	>>	,,	16.
0	三 1000	57.57	1			,,	,,	32.9
57.048	57.053	57.05	6	57.1	2	,,	"	36.7
120 · 13	MILE, MALE	56.55	1			"	,,	40.5
F4 003	F4 000	54.95	1	74.0		,,	,,	52.5
54.631	54.639	54·64 53·86	5 3	54·6 53·9	2	"	"	54·8 60·6
53.873	H- 30 M	53.35	2	00 9	1	"	"	64.4
	Time 14 18	50.52	2			"	"	85.7
	11 35 11	00 02	-	50.4	1	"	"	87.
48.962		48.94	3	48.9	1	"	"	97.4
		48.45	2	48.4	1	"	,,	27401.2
1166		45.28	1			99	,,	25.0
2600		42.65	2	40.0		,,	"	44.8
		Marghania	1 de 1	42·6 42·3	1 1	"	,,	417-
SHE LEE	DESCRIPTION AND A STATE OF	41.40	2	41.4	1	"	"	47· 54·3
184-19	THE REAL PROPERTY.	41.40	2	40.8	2	"	"	59.
40.487	40.484	40.50	8	40.48	4	"	"	61.1
	45 65	The state of	(1 m 120	39.73	8	",	"	66.9
THE PARTY		39.44	1	4-5-1	N 155	,,		74.4
140	See See	38.72	1		1000	,,	7.8	78.3
30	THE REAL PROPERTY.	38.20	1	38.1	1b	,,	"	79.
975		35.40	ln	20.0	7.	"	"	99.5
100	100	21.05	1	32.2	1n	"	"	27524· 25·6
		31·95 30·95	1 1	10.8	2000	"	95	33.2
The wall	THE PARTY OF	30.56	1	100000	STATE	"	"	36.2
30.099	AT STATE	30.12	3	30.1	1	"	"	39.6
05 000		27.39	1	1277		"	"	60.2
Con Fall	THE PARTY OF THE P	26.05	i			,,	"	70.4

	Arc Spect	rum		Spark Spe	ectrum	Reduc	tion to	
STATE STATE	Wave-length		Inten-	Wave-	Total	Vacı	uum	
		To Manual Land	sity	length	Inten- sity			Oscillation
NO BOOK SEE	Rowland	Exner	and		and	SI (Frequency in Vacuo
Kayser	and	and	Cha-	Exner and	Cha-	λ+	1_	III vacuo
	Tatnall	Haschek	racter	Haschek	racter		λ	
		3625.53	1	Name of the last		1.01	7.8	07574.4
	CHARLES THE	THE STATE OF THE S		3621.7	1			27574.4
	State of the	21.26	1	21.2	î	"	"	27604.
1000000	1 5 THE	20.40	2	20.4	î	"	"	13.5
		19.59	3	19.5	1	"	"	19.6
			P. Ban	17.1	1	1.00	"	39.
3616.726		16.73	8	16.7	2	,,		41.5
		15.77	1			"	"	48.8
The state of		13.50	3	13.4	1	,,	"	66.2
		Hall Table		12.9	1	,,	"	71.
				12.4	1	,,	"	75.
NI DESTRUCTION				10.5	1n	,,	"	89.
E STATE OF THE STA		09.83	1		LA N	,,	"	94.3
		09.30	3	09.3	1	,,	"	98.4
				09.0	1	,,	"	27701
A Salie -		07.54	1			,,	,,	11.9
04.624		05.97	1	ar and		99	,,	24.0
04.024		04.65	2	04.62	4	,,,	,,	34.2
100000000000000000000000000000000000000		04.50	ln			,,	,,	35.3
1 1/2 1/2 1/2		04.02	1			***	"	39.0
		i deledi		03.9	1	,,	,,	40.
The same		00.00		03.2	1	,,	,,	45.
LI GIVE H		02.99	1		300	,,,	,,	46.9
01.984		02.64	2	02.5	1	,,	99	49.6
3598.266	3598-264	02.00	4	02.0	1	,,	22	54.5
3090 200	3333.204	3598.25	10	3598.2	2	,,	"	83.4
Back Service		97.66	2	97.6	1	,,	,,	88.1
		95.96	1 .	09.0		,,	,,	27801.2
THE PARTY OF				93.8	ln	,,	7.9	18.
10 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Su. Therein	92.49	3	93·0 92·4	ln	,,,	"	24.
	Silv Hell	91.77	1	92.4	. 1	"	29	27.9
The second has		31 11	1	91.6	1	"	"	33.5
				91.3		"	"	35.
PARIS LANG	P. C. L.	90.28	3	90.2	1	"	"	37.
the second	N WELL	89.48	1	002	-	"	"	45.1
-	the little and	88.11	i	10000		"	"	51.3
The state of the state of	24	87.48	4	87.4	2	,,	"	61.9
		86.65	3		3-1	"	,,	66.8
I E E E E E E			415	86.5	1	"	"	73·3 74·
		84.56	2	84.5	2	,,	"	89.5
THE REAL PROPERTY.		83.55	2	83.4	ĩ	"	,,	97.4
The State of the S		83.21	2	83.2	i	"	"	27900.0
		82.95	1	82.9	î	"	"	02.1
	The state of		1000	82.3	î	"	"	07.
			Proper !	82.2	i	"	"	08.
	A CONTRACT	80.68	1	Tealble !	3 8 6 6	"	"	25.0
Mary William St.	EN PHILIPPE	80.01	1	77.8	1	20	,,	42.
		77.65	1			0.99	"	43.4
ROES STATE	1.	+1 3-5		74.9	1	"	"	65.
	1.8.	74.25	3	74.2	1	"	"	70.0
	1.1.	72.93	1			,,	,,	80.3
3 2 2 2 2 2				72.6	ln	"	,,	83.
		71.70	1		The Later of the L	,,	"	90.0
	ALCOHOL: SELEC	S. VIL, Co.	FIG.		ELEGICAL.	11-11		

OSMIUM-continued.

1		Arc Spect	rum		Spark Spectrum		Reduction to		
		Wave-length		Inten-	Wave-	Inten-	Vacu	ıum	Oscillation
1				sity	length	sity			Frequency
1		Rowland	Exner	and		and	anis.		in Vacuo
	Kayser	and	and	Cha-	Exner and	Cha-	λ+	1_	111
	224,302	Tatnall	Haschek	racter	Haschek	racter		λ	
-			3569.94	4	3569.9	2	0.99	7.9	28003.8
	The second		69.17	li	69.2	ln	,,		09.8
			68.75	1			"	"	13.1
			67.23	1	E TE		"	"	25.1
1					65.3	1	"	,,	40.
	W. Barrier		64.25	2	64.2	1n	"	,,	48.5
					63.4	In	,,	,,	55.
-				N. C.	63.1	ln	"	,,	58.
-	2 1		62.51	4	62.4	1	,,	,,	62.2
1			61.55	1			"	,,,	69.8
-			61.03	10	61.08	8	"	,,	73.9
			60.61	1	5.00		"	,,	77.2
1					60.02	6	,,	,,	81.8
-			59.97	10	59.8	6	,,	,,	82.2
1			58.96	1			"	,,	90.2
-			58.10	1		La Della	"	,,,	97.0
				10.00	57.4	ln	"	,,	28103
			56.11	2		1	"	,,	12.7
			55.85	2	100	25/4	,,	,,	14.8
-		THE RESERVE	54.70	1		11300	29	"	23.9
			54.20	1	54.1	1	"	,,	27.8
			51.09	1	51.0	1	"	"	52.4
			50.86	1	50.8	1	>>	8.0	54.2
			49.81	1			"	"	62.5
	San San		49.65	2			"	"	63.8
	- 1361		49.17	1	49.0	Control of	99	97	67.6
			48.87	1	49.0	ln	"	"	69.
	THE REAL PROPERTY.		48.03	1		-	"	"	76.6
	CONTRACTOR OF THE PARTY OF THE		40 00	10.5	47.7	1	"	"	79.
			46.25	1	46.1	ln	"	"	90.8
			10 20	1	45.6	ln	"	"	96.
	OF BUILDING		44.70	2	44.6	1	"	"	28203.1
	HIRA COL		43.85	2	43.7	i	"	"	09.9
	A THE PARTY		43.43	i	43.3	i	"	"	13.2
1	198		42.85	5	42.6	2	"	"	17.9
1			42.03	2	42.0	ĩ	"	"	24.4
1	E Service		41.68	1			,,	"	27.2
	795		40.35	1	2		"	"	37.8
1	a United		40.01	i			"	"	40.5
	STATE OF THE STATE OF				38.4	1	,,	,,	53.
1			38.13	1		1000	"	,,	55.5
1			THE PARTY	3 200	37.8	1	0.98	"	58.
1	Part Control		37.64	1		May di	"	,,	59.4
1			37.20	1	37.2	1	* ,,	,,	62.9
	100		33.55	4	33.4	1	,,	"	92.1
-	(- E.S E.)		32.98	8	P 8 5 83	DE UNIT	,,	"	96.7
					32.8	2	,,	"	98.
	being College		31.26	2	31.2	1	,,	"	28310.5
	PHIL		30.20	3			,,	,,	19.0
	0.000		00 ==	2.0	30.1	2	"	"	20.
1.	3528.743		28.75	10	28·80 28·6	6	,,	"	30·7 32·
1								"	



		0	SMIUM-	-continued				
	Arc Spect	rum		Spark Spe	ectrum	Reduc	tion to	
7	Wave-length		Inten- sity	Wave- length	Inten- sity	Vac	uum	Oscillation
Kayser	Rowland	Exner and	and Cha-	Exner and	and Cha-	λ+	$\frac{1}{\lambda}$	Frequency in Vacuo
	Tatnall	Haschek	racter	Haschek	racter		λ	
		3525·45 23·78	1 5	3523.87	4	0.98	8.0	28357-2
		23 13	3	23.6	4	"	,,	70·6 72·
		23.34	1			"	"	74.2
		22.12	2	22.1	1	"	,,	84.0
		20.15	9	21.2	ln	"	,,	91.
		19.32	3 2	20.1	1	"	,,	99.9
		19.08	ĩ			* **	**	28406·6 08·5
		18.87	3	18.7	2	"	"	10.2
				17.9	1	,,	"	18.
		17.41	2			,,	,,	22.0
		17·30 16·75	$\frac{2}{3}$	17:3	1	"	,,	22.9
		10.13	3	16·6 15·4	1 1b	"	,,,	27.3
3513.791		13.91	2	13.9	1Fe	"	,,	38· 50·8
13.145		13.15	5	13.1	2	"	"	56.5
				11.5	1	"	,,	70.
		11,38	2			,,,	,,	70.8
				11.2	1	"	,,	72.
		09.00	1	10.5	1	"	8.1	77.9
		07.21	1			"	"	90.1
		0. 21	1	06.9	1n	. "	"	28504·6 07·
		05.14	1 Ti?			"	"	21.4
0.1.01-				05.0	1n	,,	22	23.
04.811	2504.815	04.81	6	04.85	4	,,	,,	24.1
		03.61	1	00.7		"	* ,,	33.9
		01.85	1	03.5	ln	94	"	35.
		01 00		01.6	ln	"	"	48·2 50·
01.314		01.33	4	01.2	2Ba	"	"	52.5
		3499.70	1	3499.6	1	"	"	65.8
0400 000		99.43	1	99.4	1	,,	,,	68.0
3498.686		98.69	3	98.6	2	0.97	"	74.0
		98.24	1	98.3	1	. ,,	99	77.7
		100	Line -	97.2	2	"	"	80.
		95.99	1	012		"	"	96.1
		95.77	2	95.7	1b	"	"	97.9
		91.65	2	91.6	1	,,	,,	28631.7
90.464		91.24	1	00.4		,,	**	35.0
90.404		90·46 89·01	$\frac{2}{1}$	90.4	2	,,	,,	41.4
88.915		88.91	2	88.9	2	**	"	53·3 54·1
87.610		87.62	3	87.6	2	***	,,	64.8
87.387		87.40	3	87.4	ĩ	"	"	66.6
00.00-				84.1	1n	,,	,,	94.
82.380		82.38	3	82.3	2	,,	,,	28707.9
82.269		82.28	3	70 F	0	,,	,,	31.7
78.670		78.67	3	79·5 78·6	2 2	,,	,,	39.
77.798		77.76	1	77.8	16Rh	"	• ,,	45·9 52·5
		76.98	1	76.7"	1b	"	"	54.8

	Arc Spect	rum		Spark Spe	ectrum	Reduction to			
	Wave-length		Inten-	Wave-	Inten-	Vac	uum	Oscillation	
	D 1 1	· T	sity	length	sity			Frequency	
77	Rowland	Exner	and Cha-	77	and Cha-		1_	in Vacuo	
Kayser	and Tatnall	and Haschek	racter	Exner and Haschek	racter	λ+	λ		
	COLUMN TO SERVICE			3475.5	1	0.97	8.1	28765	
		3474.25	1			,,	,,	75.1	
				73.2	1	,,	,,	84.	
				72.9	1	,,	,,	86-	
				70.8	2	,,	8.2	28804	
0140 818			The second	69.7	ln -	,,	,,	13.	
3469.517		69.51	1			,,	,,	14.3	
				68.8	ln	,,	"	20.	
05 505		0 = =0		66.1	1	"	,,	43.	
65.585		65.59	3	65.6	2	,,	,,,	46.9	
		65.03	1	64.9	ln	,,	,,	51.6	
60.995		60.05	100	00.0	0	"	,,	53.	
62.335		62.35	1	62.3	2	,,	,,	74.0	
50.169		50.15	0	61.7	In	,,,	,,	79.	
59.163		59·15 58·54	2	59.2	2	0.96	"	28900.6	
		99.94	4	58.5	2 1b	0.96	,,	05.7	
		56.27	1	57.5	1b	"	99	14· 24·7	
55.172		55.16	2	56·2 55·2	2	"	"	34.0	
00 112		53.17	1	53.1	ln	"	"	50.7	
		33 11	1	52.5	1	, ,,	"	56.	
				51.5	ln	"	. ,,	65.	
		50.54	1	50.5	ln	"	,,,	72.8	
49.352	3449.346	49.36	5	49.3	2	"	"	82.7	
10 002	0110 010	10 00		48.2	ī	"	"	92.	
				46.1	î	,,	"	29010	
45.695	45.699	45.69	3	45.6	2	"	"	13.6	
44.616		44.60	3	44.6	1	,,	"	22.7	
				44.1	1	,,	,,	27.	
				41.2	1 Pd ?	,,	,,	51.	
				40.6	1	,,	,,	56.	
				40.4	ln	,,	,,	58.	
		39.97	1			,,	"	61.8	
39:639		39.63	2	39.5	ln	,,	,,	64.5	
38.792		38.76	1			,,	,,	71.9	
37.642			0			,,	"	81.5	
37.150		05.40	2	055	14 2	,,	,,	85.7	
200		35.40	1	35.5	ln	,,	"	29100.5	
24.000		35.04	1	24.0	1	"	"	03.5	
34.023			4	34.0	ln	,,	8.3	12·1 28·	
		30.20	1	32.2	ln	,,		28.	
1000		30.10	1	30.0	ln	"	"	44.5	
		90.10	-	28.7	1	99	"	57.	
27.816		27.79	3	27.8	1	"	"	64.9	
27.590		27.56	1	27.6	i	"	"	66.8	
		E TENE	188	26.6	î	"	"	75.	
				25.1	î	"	"	88.	
				24.8	î	"	"	90.	
				23.5	2	"	,,	29202	
22.800			1			,,	,,	07.5	
	200	22.43	1	22.4	1.	"	"	10.7	
21.837		21.85	2	21.8	1	,,	,,	15.7	
21.558			176			"	19	18.2	

OSMIUM-continued.

Rowland and Tatnall Exner and Chand Tatnall Haschek racter Haschek Exner and Chand Tatnall Haschek racter Haschek racter A			US	MIUM-	-continued.		,			
Nave-length Star		Arc Spectr	um		Spark Spe	ectrum				
Rowland and Tatnall Exner and Haschek racter Haschek racter Haschek racter Haschek racter Language Languag	7	Vave-length					Vaci	uum	Oscillation Frequency	
3421·34 1 3420·4 1b	Kayser	and	and	and Cha-		and Cha-	λ+			
15:36 1		10011011	Haschek		THUSCHER			moior		
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$			3421.34	1			0.96	8.3		
15:36							,,	99		
3414·390 15·36 1 17·5 1 0·95 ", 71·2 3414·390 14·38 2n 14·4 1 ", 75·3 12·946 0 ", 91·9 12·908 12·91 2 12·8 1 ", 92·2 08·900 08·90 2 08·8 2 ", 92·2 06·816 06·83 2 ", 44·5 06·423 06·45 2 06·3 1 ", 44·5 02·855 02·643 3402·654 02·66 6 02·6 2 ", 86·5 02·901 02·01 6 02·00 4 ", 98·5 00·264 02·01 6 02·00 4 ", 99·7 00·264 00·26 1 00·2 1 ", 92·1 96·973 2 97·90 1 97·6 1n ", 24· 96·973 2 95·85 2 95·8 1 8·4 39·3 91·401 91·41 1 99·6 1 ", 92·6 1 ", 92·6 88·79 1 88·6 1 ", 93·3 33·3 1 ", 93·3 88·79 88·6 1 ", 93·3 33·3 <							"	"		
3414·390 14·38 2n 14·4 1 " " 75·2 12·946 0 0 " " 79·5 12·908 12·91 2 12·8 1 " " 99·2 08·906 08·90 2 08·8 2 " " 29326·2 06·816 06·83 2 " " 44·5 06·423 06·45 2 06·3 1 " " 47·9 02·855 02·643 3402·654 02·66 6 02·66 2 " " 88·1 01·315 01·31 2 01·3 2 " " 88·61 00·264 00·26 1 00·2 1 " 92·1 00·264 00·26 1 00·2 1 " " 92·1 00·264 00·26 1 00·2 1 " " 92·1 00·2790 1 97·90 1 " " 29·1 " 29·1 "							0.05	"		
3414·390 14·38 2n 14·4 1 " 75-79·5 12·946 0 " " 91·9 91·9 91·9 91·9 91·9 92·2 98·8 2 " 99·2			15.90		17.9	1				
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$			19.30	1	14.0	1				
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	3414-300		14.22	20						
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$			14.90		14.4					
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$			12.91		12.8	1				
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$										
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$				2		FC 1155				
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$					06.7	1				
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	06.423		06.45	2					47.9	
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$					06.3	1			49.	
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	02.855			0		F137	,,	,,	78.8	
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	02.643						,,	32		
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	ell.	02.001	02.01				,,,	,,,		
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	01.315		01.31	2			,,	,,		
$\begin{array}{cccccccccccccccccccccccccccccccccccc$				- 50			"	,,,		
97.910 97.90 1 97.60 1 97.12 4 37.12 4 38.44 39.3 95.862 95.85 2 95.8 1 94.72 2 94.6 1 92.6 1 93.0 1 92.6 1 93.0 1 92.6 1 93.0 1 92.6 1 93.0 1 92.6 1 93.3 88.794 88.791 88.846 1 88.792 88.846 1 88.794 88.860 88.796 88.861 88.797 88.866 88.797 88.8606 88.797 88.8606 88.798 88.798 88.798 88.798 88.798 88.799 88.8606 88.799 88.799 88.790 88.790 88.790 88.790 88.790 88.860 88.790 88.790 88.790 88.860 88.790 88.790 88.790 88.790 88.790 88.790 88.890 88.790 8							,,	"		
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$					3398.7	1	,,,	99		
96-973 95-862 95-85 94-72 94-62 91-401 91-401 91-41 89-64 88-79 88-794 88-791 88-64 1 88-790 88-790 88-790 88-791 88-64 1 88-791 88-790 88-791 88	97.910		97.90	1	OH.C		"	"		
96.973 95.862 94.72 94.61 91.401 91.41 88.64 88.794 88.794 88.794 88.864 88.790 88.864 88.790 88.866 88.790 88.60 88.790 88.60 88.790 88.60 88.790 88.60 88.790 88.60 88.790 88.60 88.790 88.60 88.790 88.60 88.790 88.60 88.790 88.80 88.790 88.80 88.790 88.80 88.90 89.90										
95·862	06.079			0	97.12	4	125	"		
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$			05.05		05.0	1		2.1		
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	99 802		99.09	2			4			
91·401 91·401 91·41 89·64 1 89·64 1 88·794 88·79 1 88·46 1 88·90 88·46 1 86·277 86·077 86·06 84·732 84·74 84·16 83·042 81·814 81·81 80·674 93·0 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1			04.79	9						
91·401		304	3 1 1 M	-						
91·401 89·64 88·794 88·79 1 88·64 1 88·79 1 88·64 1 88·79 1 88·79 1 88·66 1 87·970 88·80 6 87·9 2 87·0 1n							3.57 (0.0)			
88·794 89·64 1 88·79 1 88·6 1n , , , , , , , , , , , , , , , , , ,	91.401		91.41	1	18.48.5	200			77.9	
88·794 88·79 1 88·6 1n " " 29500·7 88·46 1 88·0 6 87·9 2 " " 07·7 88·00 6 87·9 2 " " 07·7 86·277 86·676 1 " " 22·6 86·277 86·06 2 86·1 1n " " 24·4 84·732 84·74 2 84·7 1 " " 39·0 84·16 5 84·1 2 " " 41·0 83·042 2 83·0 1 " " 50·8 81·814 81·81 2 81·7 1 " " 61·6 80·674 78·80 2 78·8 1 " " 71·5 77·088 77·10 1 " " 29602·5 77·088 77·10 1 " " 29602·5				1		100			93.3	
87-970 88-00 6 87-9 2 " " " 16-16-16-16-16-16-16-16-16-16-16-16-16-1	88.794		88.79	1	88.6	ln	,,		29500.7	
86·277 86·27 2 86·27 2 86·27 3 22·6 86·077 86·06 2 86·1 1n " " 22·6 84·732 84·74 2 84·7 1 " 39·0 83·042 84·16 5 84·1 2 " 41·0 83·8 ln " " 50·8 81·81 2 81·7 1 " 61·6 80·674 0 80·7 1 " 66·6 80·674 0 80·7 1 " 82· 77·088 77·75 1 " 97·1 77·088 77·10 1 " 97·1 76·80 1 " " 29602·5 76·80 1 " " 90·5			88.46			THE T	,,	,,		
86·277 86·27 2 86·077 86·06 2 86·1 ln " " 22·6 84·732 84·74 2 84·7 1 " 39·0 83·042 81·81 2 83·0 1 " 44· 83·81 1n " 50·8 81·814 81·81 2 81·7 1 " 66· 80·674 0 80·7 1 " 71·6 77·75 1 " 82· 77·708 77·10 1 " 97·1 77·80 1 " 97·1 77·80 1 " 97·1 77·80 1 " 97·1 77·80 1 " 97·1 77·10 1 " 97·1 77·10 1 " 97·1 77·10 1 " 97·1 77·10 1 " 97·1 77·10 1 " 97·1 77·10 1 " 97·1 77·10 1 " 97·1 77·10 1 " 97·1 77·10 1 "	87.970		88.00	6			,,,	,,,		
86:277 86:27 2 86:077 86:06 2 86:1 ln " " 22:6 84:732 84:74 2 84:7 1 " 39:0 84:16 5 84:1 2 " 41:0 83:042 2 83:0 1 " 50:8 81:814 81:81 2 81:7 1 " 66:0 80:674 0 80:7 1 " 66:0 80:674 0 80:7 1 " 71:5 77:75 1 " 97:5 1n " 82:0 77:75 1 " 97:5 1n " 87:5 77:088 77:10 1 " 97:1 " 29:00:2 76:80 1 " " 29:00:2 80:07 1 " " 97:1 77:088 77:08 1 " 97:1 77:08 77:08 1 " 97:1 77:08 77:08 1 " 97:1 77:08 77:08 1 " " 97:1 77:08 77:08 7 1					87.0	ln	***	99		
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	00.00				14 4 1	102	"	"		
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$		The State of			08.1	1				
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	90.017		80.00	2			The second			
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	84.739		84.74	9						
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	01 102								41.0	
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$			31.10					And the second		
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	83.042			2					50.8	
80·674 0 81·3 ln , , 66·71·5 82· 78·80 2 78·8 1 , , 87·5 77·088 77·10 1 , , , 29602·5 76·80 1 , , , , , , , , , , , , , , , , , ,		16 20 3 3	81.81					100	61.6	
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$				1	81.3					
78·80 2 78·8 1 ,, 87·5 77·75 1 0·94 ,, 97·1 77·10 1 ,, 39·04 ,, 29602·8 76·80 1 ,, 39·04 ,, 39·02·8	80.674			0					71.5	
77·088		The same		12.5			"	,,,		
77·088 77·10 1 , , , 29602·8 76·80 1 , , , , 205·9		-			78.8	1	. 99	. "		
76.80 1 ,, ,, 05.4		The state of the s			THE PARTY		0.94	"		
	77.088				The state of			22		
75.208	75.268	1 - 2 - 3 - 6	76.80						18.8	

		O;	5MIUM-	-continued	•			1
	Arc Specti	rum		Spark Spe	ectrum	Reduct		
	Wave-length		Inten- sity	Wave- length	Inten- sity	Vacu	ıum	Oscillation Frequency
A DESTRUCTION OF THE PARTY OF T	Rowland	Exner	and		and		1	in Vacuo
Kayser	and Tatnall	and Haschek	Cha- racter	Exner and Haschek	Cha- racter	λ+	$\frac{1}{\lambda}$	
		3374.35	1			0.94	8.4	29626.9
		00,100	18.	3374.0	1	"	"	30.
3373.337		73.35	1			"	,,	35.8
		73.21	1			,,	,,	36.9
72.929		72.70	1			,,	,,	39.4
		72.70	3	72.2	2	,,	22	41·4 45·7
71.602		71.69	1	122	-	"	"	50.7
70.725	3370-730	70.74	8	70.70	6	"	"	58.7
70.340		70.37	. 3	70.3	1	"	97	62.1
	10 10			69.7	1	,,	,,,	68.
68.617			2	22.0	TABLE IS	,,	,,	77.4
		00.04	0	66.3	ln	,,	,,	98.
04 400	W - 1	66·04 64·50	2	64.5	1	"	"	29700.1
64·486 64·250	2 3	64.29	3	64.3	1	"	"	15.7
04.290		63.09	1	0.2.0	1	"	,,,	26.2
62.716		62.72	î			"	"	29.4
61.905			0			,,	,,	36.6
61.280		61.31	3	61.2	2	,,	,,	42.0
59.876		59.90	1			,,	8.5	54.4
58.095		58.11	3	58.1	2	,,	,,	70.2
W. 0.10	THE DESTREE	57.69	1			"	,,	73.9
54.042		54·05 51·90	3 3		133.0	,,,	,,,	29806·2 25·6
51·853 48·791	197	48.79	1			"	"	53.0
42.018		42.05	1			"	"	29913.4
40.851		40.85	i			"	"	24.0
39.601			0			,,	,,	35.2
		37.28	1	100 Table 100		0.93	,,	56.0
36.282	36.301	36.30	8	36.3	2	,,	,,	64.9
		35.62	1			,,	,,	70.9
34.295		34.30	1			"	99	82·8 85·5
33.986		34·00 29·35	1			"	"	30027.4
29.252		29.26	1			"	23	28.3
27.562		27.59	4	27.6	2	"	"	43.4
2,002		26.65	î	26.6	Ib	"	"	51.8
1991-018		26.55	1	1 2 2 17	100	,,	"	52.7
25.644	-	188	0	25.6	1b	"	,,	60.9
25.518	100	04.00	2			"	"	62.0
24.876		24.89	1 3	94.5	0	"	8.6	67·7 71·1
24.486	To all the	24·51 23·30	ln	24·5 23·5	2 2	"	,,	82.0
22.734		20 00	1	200	2	"	"	87.1
22.175		22.20	î	22.2	ln	"	"	92.0
1.0		20.58	ln	20.8	lb	,,	"	30106.6
100		20.05	ln		132 4	,,	"	11.4
18.724	THE RESERVE	18.74	ln	18.8	1b	,,	"	23.4
18.284	The Table	18.31	ln	13.113		"	"	27.3
17.998	ALC: NO.	18.01	ln			"	"	30·0 35·4
17.420		17·40 16·81	ln 2	16.8	1	,,,	"	40.8
16.822			2			"	"	49.8
			2		i			52.2
15.816		15.83 15.56		15.9	1	:,	"	

OSMIUM—continued.

	Arc Spect			Spark Spe		Reduc	tion to	
The state of	Wave-length		Inten-	Wave-	Inten-		uum	Oscillation
			sity	length	sity			Frequency
AND DESCRIPTION OF THE PARTY OF	Rowland	Exner	and		and		1	in Vacuo
Kayser	and Tatnall	and Haschek	Cha- racter	Exner and Haschek	Cha- racter	λ+	λ	
		3314.88	1)	00144		0.93	8.6	30158.4
		13.60	1	3314.1	2	,,	,,,	70.1
3312.178		12.18	1	TO MEN		,,	,,	83.0
11.035		11.05	4	11.1	2	,,	,,	93.4
		09.83	1			,,	,,	30204.4
06.352		06.34	3			,,	,,	36.3
05.501		05.51	1			29	,,,	44.0
04.980			0			"	,,	48.8
01.990	0001 700	01 50	1	01.0		99	"	76.2
01.692	3301.708	01.70	10	01.7	2 2	0.00	"	78.8
3298.374		3293-29	0	3297.3	2	0.92	22	30309.4
91.259	10.13	91.25	1	TERLINE.		"	"	56·2 74·9
OI MOU		90.40	4	90.5	2	"	"	82.8
89.387		30 40	4	30 3	-	"	"	92.2
88.960		88.96	2			"	8.7	96.0
88.616		88.57	1			"	,,,	99.4
		86.81	1			,,	,,	30415.9
84.680		84.68	1			,,	,,	35.7
81.028		81.06	2			"	"	69.4
79.590		79.55	1			"	,,	83.1
78.086		78.09	4	B		"	"	96.9
76.533		76.54	1	75.5	1	,,,	"	30511.3
75.320		75.31	4	75.3	2	"	22.	22.7
73.513		73.54	1	74.2	2	22	"	39.4
72.607		72.63	1			"	"	47.9
72.301		72.30	2	72.3	1	,,	,,	50.8
72.118		72.12	1			,,	99	52.5
F1 000				72.0	1	99	,,	54.
71.320		F1 00	0			"	,,,	60.0
71·002 70·025		71·02 70·05	1			"	"	62·9 72·0
69.340		69.36	5	69.38	4	99	"	78.4
68.080	3268.078	68.10	10	68.10	8	"	"	90.2
67.338		67.34	1	67.40	8	"	"	97.2
66.890		66.89	1			"	,,	30601.4
66.565			2			"	,,	04.5
64.820		64.85	1	64.8	ln	"	,,	20.7
62.880		62.89	4	63.00	4	"	- "	39.0
62.428		62.44	8	62.48	8	"	,,,	43.3
60.683		60.70	1	61·2 60·7	1	"	"	54·9 59·6
60.420	1	60.43	3	60.5	2	"	,,,	62.1
59.530		59.56	ln	000	- Car	0.91	"	70.4
57.051		57.05	3	57.1	2	,,	"	93.9
55.414		55.41	1			,,	,,	30709.4
55.139			0		1	"	"	11.9
55.038		55.04	3	55.1	2	,,	,,	12.9
				54.4	ln ln	"	"	18·9 28·4
		52.14	2	53.4	ln	9,0	8.8	40.2
	1	51.03	i			911	11	50.7
50.974		Sales S	0			"	,,	51.2

OSMIUM-continued.

	Arc Spect	rum		Spark Spe	ectrum	Reduction to Vacuum		
V	Vave-length		Inten-	Wave-	Inten-	Vacu	ıum	Oscillation
			sity	length	sity	-		Frequency
	Rowland	Exner	and		and			in Vacuo
Kayser	and	and	Cha-	Exper and	Cha-	λ+	$\frac{1}{\lambda}$	
	Tatnall	Haschek	racter	Haschek	racter		λ	
3250.695		3250.50	1	3250.7	2	0.91	8.8	30754.7
48.106		48.14	2n	48.1	ī			78.1
10 100		10 11		47.80	4	"	"	82.2
		45.79	ln	7,00	-	"	"	30800.3
		40 10	111	• 45.3	2	"	"	05.0
49.700			0	40.9	2	"	"	
43.700		10.11	0			,,	22	20.2
42.108		42.11	1			99	"	35.3
				42.0	1b	,,	,,	36.4
41.933		41.94	1	41.2	2	,,	,,	37.0
41.642		41.56	1			,,	"	40.1
41.159		41.18	3	1= 4		,,	,,	44.2
39.398			0	The state of		1		61.1
38.751		38.75	3			"	"	67.3
90 101		38.30	1	38.3	In	"	"	71.6
		30 30	1			"	. "	1
		Tables. 1	į .	37.0	1	"	"	84.0
				36.6	1	"	,,	87.8
				36.2	ln	99	,,	91.6
34.858		34.86	1	34.8	1	,,	,,	30904.4
34.651		34.81	1			,,	,,	05.7
34.318		34.34	1	34.3	1	,,	,,	09.5
32.672		32.67	1	32.6	1	"	,,	25.4
32.196	3232.195	32.19	8	32.20	10			29.9
32.072	0202 100	02 10	2	02 20	10	27	"	31.1
31.543		31.56	1	31.5	1	,,,	"	36.1
			1	91.9	1	"	"	
31.410		31.45		00.0		55	"	37.2
30.525		30.53	1	30.6	ln	,,,	,,	45.9
1434			1 3	30.0	ln	"	,,	51.
29.336		29.35	1			"	,,,	57.2
		To Poll		29.1	In	99	,,	60.
				28.8	1	,,,	,,	62.
27.409		27.41	2	27.4	1	,,,	,,	75.8
				27.0	1	22	,,	81.
26.579			0	26.5	1	39	,,	83.8
23.987		23.99	1	24.0	1	"	,,	31008.7
20 001		20 00		22.5	î			23.
		21.53	In	21.5	ln	"	"	32.3
21.444	H . T. H.	21 00	4	210	III	"	"	33.1
			0			0.90	"	38.5
20.895		The same of		90.4	,		"	
20.408		00.001	1	20.4	1	"	,,,	43.2
20.318		20.36		1 1 1 1 1 1	P. S. S.	"	" "	43.8
19.260		19.26	1	19.3	1	,,	,,,	54.2
18.153		18.15	1			,,	,,	64.9
100				17.4	1	,,	,,	72:
17.177		17.17	1	17.2	1	,,,	,,	74.4
				16.8	1	,,	,,	78.
The state of the s				16.6	i	,,	,,	80.
16.340			0			Allen of	8.9	82.3
10010				15.8	ln	"		88.
				13.8	2n	,,	,,	31107
		10.50	,			"	,,	
161		13.59	1	13.50	10	"	,,	08.9
13.418		13.44	1		3 64 6	,,	"	10.5
12.840		12.85	1	12.9	1	,,	"	16.2
IZ OTO								
12:240		N-XOU BE	2	12.6	1	,,	99	19· 22·0

OSMIUM—continued.

				1	-			
	Arc Spect	rum		Spark Spe	ectrum		ction to	
	Wave-length		Inten- sity	Wave- length	Inten- sity	vac	dum	Oscillation Frequency
	Rowland	Exner	and		and			in Vacuo
Kayser	and	and	Cha-	Exner and	Cha-	λ+	$\frac{1}{\lambda}$	III Vacao
	Tatnall	Haschek	racter	Haschek	racter		λ	
The Asset				3209.4	1	0.90	8.9	31150-
	The second		E I F	08.1	2	,,		62.
3205.909		3205.90	1	05.9	ln	"	"	83.5
BER VI				05.3	ln	"	,,	89.
04.646		04.64	1	04.6	ln	"	,,	95.8
01.755	1			04.3	1	"	,,,	99.
04.155	Side Maria	00.11	2	00 4	HIE-	"	"	31200.6
00.070		03.44	1	03.5	ln	"	,,	07.5
02.956	to the state	02.95	2	03.0	1	"	"	11.9
				01.0	1	"	22	28.
		00.89	1	01.0	ln	"	199	31.
		3198.26	1	3198.3	ln	"	. "	32·4 58·1
3197.310		97.30	1	97.3	1	"	"	67.2
96.152		96.11"	3°	96.2	2	"	"	78.9
96.082	The second	30 11	0	002	-	"	"	79.4
95.494		95.50	3	95.5	2	"	"	85.1
94.805		94.80	2	94.8	ĩ	"	"	92.0
94.350		94.37	3	94.4	2	"	"	96.3
93.986		93.99	2	94.0	1	"	"	99.9
MARKET STATE		91.31	1		1955	"	,,	31326.2
				90.9	1n	,,	,,,	30.2
89.566	Part I	89.56	3	89.6	2	,,	,,	43.4
87.443		87.45	2	87.5	1	,,	,,	64.2
				87.2	2	,,	22.	67.
87.096		87.08	3			,,,	"	67.7
00.010		86.65"	1			"	"	72.0
86.643			2 2	00.70		,,	,,,	72.1
86·516 85·439		85.42	3	86·50 85·4"	4	"	"	73.3
85.304		89.42	0	89.4	1	"	,,,	84·0 85·3
84.458		84.46	1			"	"	93.6
83.905		0110	ō			"	"	98.2
83.661			1		363	"	"	31401.5
			20710-0	83.5	1	"	"	03.
83.341			0	THE STORY		,,	"	04.6
		82.92	1	83.0"	1	,,	"	09.
	No Returned	82.68	2	82.7	2	:,	,,	11.2
		82.35	1		1377	,,	,,	14.4
81.907		81.99	3	82.0	2	0.89	"	18.4
80.237		80.23	1	80.3	1	"	9.0	35.2
70.957		79.37	1	79.6	1b	39	"	43.8
78·357 78·184		78·36 78·18	5	78.3	2	"	"	53.8
77.522		77.51	1			"	"	55·5 62·1
75.781		75.77	î	75.7	ln	"	••	79.4
13 101				75.0	ln	"	"	87.1
74.284			1	The second		"	"	94.2
74.037		74.05	1	74.03	8	,,	,,	96.6
73.609			0			"	,,	31500.9
73.306		73.31	2	73.4	1	22	,,	03.9
REPLECIES D	St. I was	72.96	1	-0.0	. 3	,,	,,	07.3
Series Co.		71.75	,	72.6	1	"	"	10.9
-320,10,1	113 - 10	71.75	1			29	29	19.3

	Arc Spect	rum		Spark Spe	ectrum	Reduc	tion to		
7	Wave-length	A Section	Inten-	Wave-	Inten-	Vacu	ıum	Oscillation	
			sity	length	sity			Frequency	
CONTRACTOR OF SERVICE	Rowland	Exner	and	100	and		1	in Vacuo	
Kayser	and	and	Cha-	Exner and	Cha-	λ+	$\frac{1}{\lambda}$		
	Tatnall	Haschek	racter	Haschek	racter		٨		
3171.249			0			0.89	9.0	31524.3	
				3170.6	1	,,	,,	31.	
SILL SE				68.9	In	,,	,,	48.	
				68.5	2	,,	,,	52.	
68.390		3168-39	2			,,	99	52.8	
				68.2	1n	,,	,,	55.	
66.611		66.62	3	66.65	4	,,	,,	70.5	
65.772			. 2	65.82	8	,,	,,	78.9	
				64.8	1	- ,,	"	89.	
64.718		64.75	2	64.7	1	,,	,,	89.2	
64.550			0			,,	,,	91.1	
61.837		61.86	2	61.8	1	,,	,,	31618.1	
61.547		61.55	2	61.6	1	,,	,,	21.1	
60.540		60.57	2			,,	,,	31.1	
60.397		60.44	1	60.4	1	,,	,,	32.4	
59.477		59.48	1			,,	99	41.8	
				58.6	1	,,	,,	51.	
		1000		58.2	1	,,	"	55.	
57.342		57.35	2	57.3	1	,,,	,,	63.2	
57.102	139	57.11	1	57.1	1	,,	"	65.6	
56.878		56.89	3	56.9	2	,,,	99	67.8	
56.365	3156.384	56.38	8	56.35	10	,,	,,	72.9	
55.450		55.45	1			,,	,,	82.2	
54.666			0	54.5	1b	,,,	,,	90.1	
53.727		53.72	3	53.7	2	,,	,,	99.6	
52.806		52.80	3	52.8	2	"	,,	31708.8	
52.181		52.19	2	52.1	2	,,	,,,	15.0	
51.005			0	-0-		,,	"	26.9	
50.730			On	50.7	1	,,	,,	29.7	
50.260		40.00	0	40.0		"	"	34.4	
49.927		49.93	ln 0	49.9	1	29	,,	37.8	
49.365			0			"	""	43.4	
47.601			0			"	9.1	61.2	
46.843			U	46.5	1	"		72.	
46.074	Battle M	46.08	1	46.1	1	"	,,	76.5	
46.074	100	40.08		45.4	ln	"	"	83.	
44.471	150	44.50	2	44.5	2	"	,,	92.6	
43.169		43.19	1	43.2	1	"	"	31805.8	
41.056		41.06	1	41.1	i	0.88	"	27.3	
40.431	THE REAL PROPERTY.	40.44	1	40.5	1		"	33.6	
39.745		20 11	Ô	100	4500	**	"	40.6	
38.157		1 100	1	38.2	1	"		56.7	
37.636		37.65	i	37.7	li	",	"	62.0	
37.421		0.00	o		1 - 500	",	"	64.2	
36.785		1000	0	1 1 1 1	11/1/12	"	,,	70.7	
36.334			0			,,	,,	75.2	
35.126	No. 14 St		0	TE TOTAL	1 3 1	,,	"	87.5	
34.805	The state of		0	BEST HE	N ST	"	"	90.8	
33.953			0	34.0	1	"	"	99.1	
30 000		1 1	The T	32.8	1b	"	,,	31911.	
31.995			0		1	,,	"	19.4	
The same		31.62				"	"	23.3	
31.027	100	31.23		31.3	2	"	"	27.2	

Osmium-continued.

The same	Arc Spect	rum		Spark Spe	ectrum	Reduc		
1	Vave-length	14	Inten-	Wave-	Inten-	Vac	uum	Oscillatio
			sity	length	sity			Frequenc
BURE	Rowland	Exner	and		and		1973	in Vacuo
Kayser	and	and	Cha-	Exner and	Cha-	λ+	$\frac{1}{\lambda}$	III Vacao
aray ser	Tatnall	Haschek	racter	Haschek	racter	~ 1	λ	
3131.021	Prop. 1974		0			0.88	9.1	31929.4
0101 021				3130.5	1			35.
30.125		3130.14	1	30.2	î	"	"	38.4
29.348		29.35	1	29.3	î	"	"	46.4
20 010		20 00	18 10	29.0	i	"	"	50.
28.677		28.55	lu	28.6	î	"	"	
27.620		20 00	0	200		2,2	"	53.9
21 020			0	27.0	1	"	"	64.1
25.643			0	25.6	În	"	"	70.
20 040		25.05	ln	200	111	"	"	84.3
		20.00	111	24.4	1	"	, ,,	90.4
94,149		24.14	10	24.4	In	"	19	97.
24.142		24.14	ln	99.5	1	"	"	99.7
				23.5	ln	"	"	32006
97 709			0	22.8	ln	"	"	13.
21.592			0			,,	"	25.8
21.307		20.00	0	20.0	7.5	. ,,	,,	28.8
20.777		20.77	1	20.8	1	"	,,	34.2
20.016		20.00	1	20.0	1	"	99	42.0
19.196			0	19.2	ln	,,	"	50.4
				18.5	2	,,	,,	58.
18.450		18.44	2			,,	,,,	58.2
18.242		18.24	1	18.3	2n	,,	22	60.3
18.014		18.00	1			,,	,,	62.7
17.215			0			- ,,	,, .	70.8
16.593		16.59	1	16.6	1	,,	,,	77.6
15.838						,,	"	85.0
			0	15.6	1n	"	,,	87.4
15.150		15.13	1	15.1	1	,,	"	92.2
14.932		14.92	1	15.0	1	,,	,,	94.4
13.405			0	13.5	1	,,	9.2	32110.0
12.630			0	ESLV		,,	"	18.0
11.196		11.20	2	11.3	2	,,	. ,,	32.8
10.743		10.75	1	10.7	1	"	"	37.4
10.538			1	10.5	1	"	"	39.6
09.800		09.79	1	09.8	2	"	"	47.2
09.504		09.50	3	09.5	2	"	"	50.3
09.102		09.09	3	09.1	2	"	"	54.5
08.846		I SASS	0	08.9	1	"	"	57.1
08.098		08.08	1	08.2	î	"	"	64.9
07.989		08.00	ī	The state of	9997	"		65.9
07.495		07.49	i	07.5	1	"	"	71.1
07.119			0		METAL ST	"		75.0
06.762			0	06.8	1n		"	78.7
06.114		06.10	3	06.2	2	"	"	85.4
		33.20	BERM	05.7	ī		"	90.
				05.5	î	"	"	92.
05.098		05.09	2	05.2	i	"	"	95.9
05 050		00 00	1800	04.0	1	"	,,,	32207
03.412		03.53	1n	. 03.5	1	"	"	12.8
02.835		00 00	2	02.9	1	"	"	
02.503		02.50	1	02.5	1	"	"	19.4
02 303		02.50	3	02.3	2	0.87	,,,	22.7
		01 04	3	01.4	1		"	31.8
						, ,,	99	

OSMIUM—continued.

		Arc Spect	rum		Spark Spe	ectrum	Reduc	tion to	
-	1	Wave-length		Inten-	Wave-	Inten-	. Vacı		Oscillation
-				sity	length	sity			Frequency
		Rowland	Exner	and		and		1	in Vacuo
	Kayser	and	and	Cha-	Exner and	Cha-	$\lambda +$	$\frac{1}{\lambda}$	
		Tatnall	Haschek	racter	Haschek	racter		^	
			Table		3098.7	1	0.87	9.2	32262
					95.2	1b	,,	99	99.
	3094.192		3094.20	1			,,	,,	32309.4
	93.701		93.70	2	93.8	2	,,	,,	14.5
					92.8	- In	,,	,,	24.
	92.613	A ELECTRIC		0			"	,,	25.9
	THE STATE OF				91.5	2	,,,	,,	38.
	91:368		91.38	1	RIES DO		,,	,,	38.9
	90.613		90.62	1	90.7	1	"	"	46.8
	90.416		90.42	1	90.5	1	"	22	48.9
	90.205	STATE OF	90.21	2	90.3	2	,,	"	51.1
	00.00	Triber 1 Sill	The state of		89.5	ln	"	"	58.
	88.545	THE RELL	000	0	88.5	1	"	"	68.5
	88.385	- T	88.37	1	00.6	The state of	"	"	70.2
	07 000	DE LES	G(1548)		88.0	1	,,,	"	74.
	87.868			2	0.0		"	"	75.6
	OM 7 24				87.3	1	"	"	82.
	87.125	Parent Land	00.40	0	00 =	Page	,,	"	83.4
	86.394	100	86.40	1	86.5	1	"	"	91.0
	85.982	Elec Hilliam		0	050		- ,,	"	95.4
	05 004	THE EAST.		1 0	85.2	2	"	"	32404
	85.004		04 50	2	85.0	1	,,,	"	05.7
	84.715	S. S. S. S. S. S.	84.72	1	84.0	1	"	"	08·7 16·
						1	"	9.3	
	83.565			0	83.7	1	99		19.
	09.909	A STATE OF		U	82.9	1	"	"	28.
			a new y		82.6	1	"	"	31.
	81.313			0	02 0	1	"	"	44.4
	80.907		1 1 1 1 1 1	0			"	"	48.7
	00001	Market Town			80.7	ln	"	"	51.
	80.614			0	00,	111	,,	"	51.8
	00011		79.67	1	79.7	1		"	61.7
			.001	13000	79.4	î	"	"	65.
	78.496		78.48	2	78.6	î	"	99	74.2
	78.227		78.20	3	78.3	2	"	"	77.1
	77.834	3077.841	77.82	4	77.82	4	"	"	81.1
	77.557	DE LA	77.55	2	77.6	2	,,	,,	84.0
	77.167		77.16	2	77.2	2	"	,,	88.2
	76.845		76.86	ln	76.8	1	"	,,	91.4
	118000				76.5	2	"	"	95.
	75.074		75.06	2	75.2*	2	"	27	32510.3
	74.771	1 1 1 No. 1 1 1		0	THE PERSON	Page 1	"	,,	
	74.192		74.21	3	74.3	2	"	,,	13.4
	MOTOR SE			THE STATE OF	73.3	2	"	,,	29.
	72.681			0	18 18 2 2	1700	"	"	35.6
	71.974	Carlo San	1	1		. 20	,,	,,	34.1
	70.374		70.38	1	70.5	1	"	"	60.0
	70.049	THE PERSON	70.05	2	70.1	2	"	"	63.5
	00.012		69.25	1		130	,,	"	71.9
	66.945		66.97	1	67.1	1	"	"	96.3
	66.715		66.71	1	66.6	1	"	"	98.9
	66.225		66.25	2	66.3	1	"	"	32604.0
	65.783			0			"	99	08.8

^{* 3076.0 (10)} Zn? possibly belongs to Osmium.

	Arc Spect	rum	NEW YORK	Spark Spe	ectrum		tion to	
	Wave-length		Inten-	Wave-	Inten-	Vac	uum	Oscillation
			sity	length	sity		7	Frequency
	Rowland	Exner	and		and			in Vacuo
Kayser	and	and		Exner and	Cha-	λ+	1_	30000
	Tatnall	Haschek	racter	Haschek	racter		λ	
3065:391			0			0.87	9.3	32613.0
63.480			ì					33.3
62.803		3062.80	1			0.86	"	40.5
62.584		62.59	1		100	"	,,	42.8
62.297		62.31	3	3062.23	4	,,	,,	45.8
62.039			0			,,	,,	48.7
61.814		20.11	1			"	,,	51.1
60.412		60.44	2	60.5	2	"	,,,	65.9
60·248 58·782	3058.766	58.80	0 8	FO.TC	10	"	"	67.8
30.102	9099-100	99.90	0	58·76 58·4	10	"	"	83.4
				58.2	1	"	"	88.
57.014		57.03	1	57.0	i	"	"	32702.3
56.315		0,00	0	0,0	•	"	"	09.8
55.726			0		DOM:	"	"	16.2
55.326		55.33	1	55.4	2	"	"	20.4
SULT H				55.2	1	,,	"	22.
55.086		55.09	1			"	,,	23.0
54.780			0		I G. L. S. I	,,	,,	26.3
54.620			1			"	"	28.0
54.091			2	100		93	9.4	33.6
53.743			0	70 =	TOTAL	"	"	37.3
53.004	CHE LONG		0	53.5	1	"	"	40.
52.540		52.55	1	53·0 52·5	1	"	"	45·2 50·2
02 010	28	02 00	1	51.4	î	3.9	"	62.
51.280		51.29	1	91.4	E CO	27	"	63.7
50.517		50.53	2	50.6	2	39	"	71.9
49.580		49.58	2	49.6	1	47	"	82.0
49.172		49.17	1	49.2	2	,,	"	86.4
47.574	40 1 3		1	47.6	In Fe	"	"	32803.6
46.200			0	46.3	1	,,	,,	17.
4= 000		4= 00		100	20 m m	"	,,	18.4
45·898 45·430	St. Total	45·90 45·43	1	46.0	1	"	"	21.6
45.430	De Salar	45.43	1	45·4 45·1	1 1	"	"	26·7 31·0
44.525	BEE WAY	44.54	1	44.6	1	,,	"	36.4
44.191	-3 -4	44.20	1	44.2	1	"	"	40.0
44.040						"	"	41.7
43.793		43.78	2	43.8	1	,,	"	44:4
43.622	The state of the s	43.62	2	43.7	1	"	,,	46.2
42.860		42.85	1	42.83	8 Ti ?	99	"	54.5
41.021	41.023	41.03	4	41.00	8	,,	"	74.2
40.184	100		1			,,	"	83.4
36.668	THE SECTION AND ADDRESS OF THE PARTY OF THE		2	25.2		"	"	32921.4
33.843			0	35.3	1	"	,,	36· 52·1
33.331			2	33.4	2	"	"	57.6
32.924	No. of the last of	32.94	1	33.0	1	"	"	62.0
31.828			î	000	2000	"	"	74.0
31.418	ESPECIAL ST	31.41	1	31.5	1	"	"	78.5
31.122		31.13	1	31.2	1	"	,,	81.6
30.817		30.83	4	30.82	8	"	"	84.9
29.496		le Brain	2		URB I	,,	,,	99.4

	Arc Spects	rum		Spark Spe	ectrum	Reduction to		
1	Wave-length		Inten-	Wave-	Inten-	Vacı	ıum	Oscillation
			sity	length	sity			Frequenc
	Rowland	Exner	and		and	-000		in Vacuo
Kayser	and	and	Cha-	Exner and	Cha-	λ+	$\frac{1}{\lambda}$	200
	Tatnall	Haschek	racter	Haschek	racter		λ	
	S 40 7007	3029.03	1	3029.1	1	0.86	9.4	33004.5
		002000		28.8	î		33.75	07.
3028.032			2	-		"	"	15.3
27.790			0			"	"	18.1
27.659			1	27.6	2	"	"	19.4
				25.5	1	"	"	43.
24.434			0			"	9.5	54.5
			1000	23.7	1b	"	,,	63.
				22.9	1n	0.85	"	71.
22.382			0			,,	"	77.0
21.226			0	-Leader 18		,,	"	89.6
			1000	21.1	1	"	,,	91.
			100	20.9	1	,,	,,	93.2
20.782			3			,,	"	94.5
		20.63	2	THE RESERVE		"	"	96.2
19.498		19.50	2 3	19.6	2	"	"	33108-6
18.744			0	1 1 1 1 1 1 1		,,	"	16.9
18.440			0		THE REAL PROPERTY.	"	"	20.2
18.169	3018-155	18.16	4	0.1		,,	"	23.3
			11	18.13	8	"	"	24.
17.380		17.38	3	17.4	2	,,	"	31.8
15.772		15.77	1	15.8	1	"	"	49.5
			13000	15.4	1n	,,	"	54.
15.158			0	FIGURE !	-	,,	,,	56.5
			1000	14.4	1	,,	,,	65.
14.068			2	14.00	4	,,	,,	68.2
13.194		13.22	3	13.3	2	"	"	77.7
12.902			1			"	"	81.1
		12.52	1		H. C.	,,	>>	85.3
		10.05	1	10.1	1b	,,	"	33212-5
			19 PM	08.7	1	,,	"	27.
08.022	The second second	08.05	1	08.0	1	,,	,,	34.8
		07.00	1			,,	"	46.2
05.878			0			,,	,,	58.6
05.064		A CARLO	0		BU ME	,,	,,	67.7
04.872			0			,,	,,	69.8
03.605		03.62	1	03.6	2	,,	• • • •	83.7
			ENE	02.8	1	"	,,	93.
TY DE			1	02.0	1	,,.	,,	33302
			150	01.1	1	,,	,,	12.
00.234			1	00.2	1	"	,,	21.5
		4		2999.2	1	,,	,,	• 33.
2997.777		2997.75	2	97.8	2	,,,	"	48.
96.385	AND RESIDEN		0		100	"	9.6	63.9
95.762			2	95.7	1	"	,,	70.9
95.298			0	010		19	,,	75:3
94.908		00 50	0	94.9	1	"	"	80.4
93.698		93.70	1	93.7	1	"	,,,	93.9
02.210		000:	1-5/	92.5	1	"	,,	33407
92.240		92.24	1	92.3	1	"	"	10.5
90.763			1		12:00	"	"	26.
89.963		No. of the last of	0	000	1	" "	"	35.6
00 000		00.07		89.8	ln	"	- 99	37.
89.655		89.65	1	18	1	"	>>	39.1

OSMIUM-continued.

	Arc Spect	rum		Spark Spe	ctrum	Reduct	tion to	
V	Vave-length		Inten-	Wave-	Inten-	Vacı	ıum	Oscillation
	D 1 1	-	sity	length	sity			Frequency
V	Rowland	Exner	Cha-	E	and Cha-		1_	in Vacuo
Kayser	Tatnall	and Haschek	racter	Exner and Haschek	racter	λ+	λ	
2989-253	line Ba	2989-25	1	2989.2	1	0.85	9.6	33443.6
88.396		88.37	1	88.5	1	,,	,,	53.3
		87.76	1	0		,,	,,	60.3
				86.2	1 .	,,	99	78.
85.752		85.75	1	85.7	1	,,	,,	82.8
85.084			0	85.0	1	,,	,,	90.3
84.751			0	THE WALL		,,	,,	93.8
84.419		84.43	ln			,,	• • • • •	97.7
				, 83.6	2	,,	,,	33507
00.000		00.05		83.2	1	,,	,,,	11.
83.032		83.05	2		F 15.	,,,	,,	13.2
82.680	Date of	82.70	1			0.84	,,	17.2
82.252		82.25	1	81.7	1b	2,9	,,	22.1
00.459			0			29	,,	28.
80·453 79·802			0	80.5	1	"	,,	42·3 49·7
79.555		79.54	1	79.5	1	"	"	52.5
78.645		78.63	1	78.7	1	"	"	62.7
78.338		78.31	1	78.4	1	"	99	66.3
77.757		77.75	2	77.7	2	99	"	72.8
11 101		11 10	-	77.5	ī	"	,,,	76.
76.470		THE PARTY NAMED IN	0	110	1	"	"	87.2
75.461		75.45	1	75.5	1	,,	"	98.7
10 101		70 10	1	75.3	i	"	"	33600
THE STATE OF		72:36	1	72.3	În	"	"	33.7
71.098		71.10	3	71.10	4	,,	"	48.0
70.825		70.80	1			,,	9.7	51.1
69.938			0			,,	,,	61.0
		68.55	1	68.5	1b	,,	,,	76.8
67.860			0		100	,,	,,	84:6
			Service A	67.0	1	.,	,,	94.
66.685			0		1		,,	97.9
66.428			0	66.4	1	25	,,	33700.9
66.217			0	0-0		1.	59	03.3
0= 0:-				65.6	1	92	,,,	10.
65.215			1	65.3	1	,,	**	14.7
64.890		64.75	0	64.7	1	22	,,	18.4
64.190		64.21	1 3	64.2	2	"	, ,,	20.0
63.178		04.21	0	63.1	1	,,	"	37.8
63.005			1	09.1	1000	"	,,	39.8
62.819			0	1		"	"	41.9
62.465		62.45	2			, ,,	, ,,	46.1
62.272		62.29	2	62.3	2	99	,,,	48.1
61.526			0	-	A SE	"	"	56.7
61.140		61.15	2	61.1	2 Cu	? ,,	"	61.1
58.467		58.48	1	40 75 70	1 3 5	,,	"	91.5
57.774		The same of	ō		18	,,	"	99.5
57.214		57.20	1	57.2	1	,,	"	33806.0
56.629		56.62	1	56.6	1	,,	,,	12.6
	The same of			56.3	1	,,	,,	16
55.128		55.13	1	55.1	1	,,	,,,	29.8
			1000	54.7	1	"	,,	35.
		The Park	1300	53.7	1 1	,,,	22	46.

OSMIUM—continued.

	Arc Spectrum			Spark Spe	Reduction to			
				777	1	Vacı		
	Wave-length		Inten-	Wave- length	Inten-			Oscillation
1	Rowland	Exner	sity	lengun	sity			Frequency in Vacuo
Kayser	and	and	Cha-	Exner and	Cha-	λ+	1_	III Vactio
rayser	Tatnall	Haschek	racter	Haschek	racter	N.	λ	
2952-412	gre in Milit	2952.45	1	2952.4	1	0.84	9.7	33860.7
				51.7	1	,,	,,	69.
51.357			1	51.3	1	,,	,,	73.0
50.986		~~ ~~	1	50.9	1	,,	,,	77.3
10.000		50.00	1			,,	,,,	88.6
49.930		49.93	1	40.0	-	,,	,,	89.4
49.635	TARLE BY		3	49.8	1	"	"	91.
49.635		49.63	3	49.62	6	"	,,	92·8 92·8
48.328		48.33	4	48.30	4	"	"	33907.8
47.277		10 00	0	10 00	-	"	,,	19.9
46.705	The latest		0			"	"	26.5
45.437			0	45.5	1	"	9.8	41.0
			TO BE	44.2	1n	,,	,,	55.
43.756			1			,,	,,	60.4
43.291			2			,,	,,	65.8
42.981		42.96	2	43.03	4	0.83	,,	69.5
42.692		10.00	0			,,	,,	72.7
42.348		42.32	ln .			"	,,,	76.8
42.267			1			,,	,,	77.6
41.989			0	41.0	11.	"	,,	80.8
40.873			0	41.0	1b	"	"	92.7
40.694			0			",	"	93·7 95·8
40.208			0			"	97	34001.4
39.519			0			"	- ''	09.4
38.590			0			"	"	20.1
38.491			0	38.4	1n	"	"	21.3
37.111			0	37.0	2n	"	,,	37.3
36.817			2	1-12		"	,,	40.7
		EXILE		35.6	lb Zn?	,,	,,	55.
35.083		04 77	0	0.4 =	-1-14	,,	"	60.8
34.779		34.75	2	34.7	1	"	,,	64.5
34·420 34·111			0 3	34.1	1	,,	99	68.5
32.585	11. 11. 12.	OF WELL	2	32.6	1	"	"	72·1 89·8
02 000		Real Property	1	32.4	1	"	"	92.
31.879		1 4 11 11	0	02 1		"	"	98.0
31.416		31.42	2	31.3	2	"	"	34103.4
30.704		30.69	1	30.6	ī	,,	,,	11.8
30.334		30.32	1	30.3	1	,,	,,	16.1
29.646		29.62	2	29.5	2	,,	,,	24.2
27.370		D 37 9 10	0			,,	,,	50.5
07 500		0 - 00	-	26.0	1	,,	- ,,	67.
25.708		25.69	2	25.6	2	,,	,,,	70.1
25.414		25·41 24·64	1	94.6	,	"	"	73.4
24·617 23·298		24.04	2	24.6	- 1	"	. ,,	82.6
23.798			0	23.1	1n	"	"	98·1 34200·4
22.818			0	201	111	,,	"	03.8
21.193		21.20	1	21.3	1b	"	9.9	22.6
20.974			Ō		1.0	"	,,	25.2
20.204		1 (2)	1			,,	,,	34.3
19.935		19.94	4	19.85	8	••	,,	37.4

OSMIUM—continued.

	Arc Spect	rum		Spark Spe	ectrum	Reduc	tion to	
The state of	Wave-length		Inten-	Wave-	Inten-		num	Oscillation
	1	1	sity	length	sity		1	Frequency
	Rowland	Exner	and		and		1	in Vacuo
Kayser	and	and	Cha-	Exner and	Cha-	λ+	$\frac{1}{\lambda}$	
	Tatnall	Haschek	racter	Haschek	racter		^	
2919-380			0			0.83	9.9	34243.9
19.053			0	The state of the s		,,	,,	47.8
17.946		2917.94	2	2917.8	2	99	"	60.8
17.383		17.37	3	17.3	2	"	"	67.5
16.193			0			,,	,,,	81.4
15.586			0	15.7	1	,,	"	88.5
15.382			0			"	"	90.9
14.841		14.84	1	14.7	1	,,	,,	97.3
14.341			1			,,	,,	34303.2
13.969		13.96	1	13.8	1	,,	,,	07:6
12.470		12.47	3	12.40	8	,,	99	25.2
11.939			0		RIFE	99	99	31.5
11.695		10-11-11	0		WAR ET	,,	,,	34.4
11.466		11.47	1			,,	,,,	37.2
11.269			0	11.2	1b	,,,	,,	39.4
10.801			1			"	,,	44.9
	2000			10.6	2	99	"	47.
09.797	2909.79		1			99	99	56.8
				09.6	ln	,,	99	59.
09.185		09.20	8	09:05	10	,,	,,	63.9
08.468			0			,,	99	72.5
08.150		08.15	1	08.1	1	,,	,,	76.2
				07.1	ln	,,	99	89.
06.909			0			,,	,,	90.9
Decompared.			1	06.7	1	,,	,,,	94.
06.103		06.09	1	06.0	1	,,	99	34400.5
05.862		05.85	1	05.8	1	"	,,	03.4
03.354		03.34	1	03.2	2	0.82	"	33.1
03.193		03.21	1			,,	,,	34.8
01.455		01.45	1			"	3.9	55.6
01.308			0			,,	,,,	57.3
				01.2	1	,,	,,	59.
				00.3	1	,,	,,,	69.
2899.372			0	2899.3	2	,,	99	80.3
98.023		0000	0	000		,,	"	96.4
96.183	THE RESTA	2896.19	2	96.2	2	,,	10.0	34518.2
00.01		95.19	1	95.3	1	,,	,,	30.0
93.014		00.47	0	00.4		,,	,,	56.0
92.466		92.47	1	92.4	1	,,	,,	62.6
91.961		91.98	1	000	3013	,,	,,,	68.5
90.970		91.00	1	90.9	1	,,,	"	80.3
89.654			0	L SIP		,,	,,	96.2
89.280		00.0-	1	Formalian		97	27	34600.7
86.622		86.65	ln 0	0.00	0	"	,,	32.4
86.368	The state of		0	86.3	2	,,	,,	35.4
86.182			0	05.0	0	"	,,	37.8
85.295			0	85.2	2	,,	??	48.5
84.967		04.5-	0	04.4	11. 7.0	,,	"	52.4
84.537		84.55	1	84.4	1b Zn?	,,,	"	57.5
84.064		Page 1	1	00.4	1	,,	,,	63.3
		RELEVE	1	83.4	ln	"	"	71.
		-01-85	102 3	82.6	1b	,,,	"	81.
00.455		1 == ==	-	81.8	ln	"	,,,	91.
80.477		111111111111111111111111111111111111111	0			99	19	34706.5

	ion to	Reduction to		Spark Spe		rum	Arc Spectrum		
Oscillatio	ıum	Vacu	Inten-	Wave-	Inten-		Wave-length	Help if	
Frequenc		4	sity	length	sity		-	THE PARTY OF THE P	
Frequenc in Vacuo			and		and	Exner	Rowland		
	$\frac{1}{\lambda}$	λ+	Cha-	Exner and	Cha-	and	and	Kayser	
	λ		racter	Haschek	racter	Haschek	Tatnall		
34708.3	10.0	0.82	2	2880.3	2			2880-327	
12.7	,,	,,			0			79.956	
19.	,,	"	2	79.4	E 124				
23.1	"	"	STILL		0			79.095	
30.1	,,	"			2	2878-52		78.524	
32.	,,	,,	2	78.4					
40.	,,	,,	1	77.7	100.7				
42.8	,,,	,,	1	77.4	2	77.46		77.464	
53.2	,,	,,			0			76.602	
61.4	,,	,,			0			75.930	
68	,,	,,	2	75.4					
71.7	,,	,,	2	75.0	3	75.07		75.083	
75.4	,,	,,	1	74.7	1	74.73		74.700	
82.	,,	,,	1	74.2	1				
90.4	,,	,,			3			73.534	
95.3	,,	,,			0			73.126	
34802.5	10.1	,,			2	72.52		72.529	
04.	,,	,,	1	72.4	130				
17.	,,	,,	2	71.3	122				
45.	,,	,,	ln	69.0	A STATE OF THE STA				
64.	,,	,,	1b	67.5					
66.9	99	99			1			67.216	
83.0	,,	,,			0			65.892	
84.3	,,	2,9	1	65.7	1	65.80		65.802	
92.3	,,	"			0			65.131	
34901-0	,,	0.81	ln	64.3	2			64.366	
13.	99	"	2	63.4					
30.	,,	"	1	62.0					
31.8	,,	,,	75.	01.00	0	01.00	STORE STORE	61.895	
41.7	,,	"	4	61.00	3	61.09	ALL THE	61.075	
52.8	"	,,,	1	60.1	1	60.17		60.184	
70.4	"	"			. 0			58.733	
76.8	19	"			0	FH CF		58.210	
83.6	,,	"				57.65		57.659	
90·2 92·	,,	,,	1	57.0	0			57.117	
94.	"	"	1	56.8					
35010.6	"	"	1	90.9	1	55.45		PN 400	
13.	"	59	1	55.3	100	99.49		55.455	
26.0	"	,,		0.7.3	0			52.071	
29.	,,,	"	1n	54.2	U			53.971	
35.3	,,	"	ln	53.5	0			59.441	
52.	"	99	ln	52.1	0			53.441	
63.	55	"	1	51.2					
66.7	,,,	"	4	50.82	3	50.89		50.877	
84.8	"	,,	100	00 02	ln	49.40		49.427	
86.	"	"	1	49.3	KALL I	49 40		40.441	
87.9	"	"	î	49.1	1	49.15		49.175	
97.8	10.2	"	2	48.3	2	48.35		48.360	
35109-5	"	"	100	100	0	10 00		47.408	
18:45		"			1	46.65		46.707	
20.7	"	"			2	46.50		46.507	
22.	"	"	2	46.4	10.158 T	2000		40.007	
33.	"	"	ln	45.5					

	Reduction to Vacuum		Spark Spectrum			Arc Spectrum					
Oscillatio	um	Vacu	Inten-	Wave-	Inten-		Wave-length	1			
Frequenc		1	sity	length	sity						
in Vacuo	1	788	and		and	Exner	Rowland	HIST Z			
	$\frac{1}{\lambda}$	λ+	Cha-	Exner and	Cha-	and	and	Kayser			
	٨		racter	Haschek	racter	Haschek	Tatnall				
35138-4	10.2	0.81		7	0			2845.067			
41.7	"	,,			1	2844.80		44.802			
45.3	"	"			3	44.51		44.501			
46.4	,,	"	6	2844.42							
64.	,,	,,	1	43.0							
79.9	,,,	,,		ST. C.P.	2	41.70		41.711			
82.	,,	,,	1	41.5				S ESTITUTE !			
94.2	,,	,,			2			40.557			
35201	- ,,	"	1	40.0		- PARTE					
03.7	,,	,,	1	39.7	0	5 6		39.792			
16.6	,,	"	8	38.70	4	38.74		38.751			
22.4	,,	,,	2	38.2	2	38.28		38.283			
31.6	,,	,,			2	37.53		37.542			
33.	,,	,,	ln	37.4				ME ELL			
48.	,,	,,	1	36.2							
72.	,,	,,	1	34.3							
93.	,,	,,	1	32.6		The Mark					
96.2	"	"	1	32.3	1	32.35	STATE OF THE PARTY	32.345			
35304.3	"	"	DO LOUIS		2			31.693			
07.	"	,,	1	31.5	OF THE			THE SENIO			
09.	,,	"	1	31.3	200			OVER THE REAL PROPERTY.			
27.	"	"	î	29.9				THE PARTY			
32.5	,,	,,			2	29.40		29.468			
33.1	"	,,	1	29.3	2			29.390			
36.2	,,	"			0			29-138			
45.	,,	"	1	28.4							
54.6	,,	,,			0			27.670			
62.5	,,	"			0			27.038			
82.5	,,	"			0			25.437			
84.	"	,,	1	25.3							
87.9	"	"			1			25.013			
89.0	,,	0.80			0			24.918			
91.	,,	,,	1	24.8							
97.0	,,	,,	1	24.2	1	24.27		24.283			
99.9		"			0			24.051			
35404.4	10.3	99		THE STATE OF THE S	0			23.687			
33.5	••	"	APPAT II		1	21.37		21.367			
36.	,,	"	2	21.2	1 3 3 -5			STREET,			
42.3	,,	"		FEMALES IN	1	20.66		20.682			
44.	,,	22	1	20.5		U. E. C. STORY	S. Herris	DECEMBER 1			
47.3	,,	22	2	20.2	1	20.30	NET TO VE	20.298			
55.7	59	,,	MET TE		0			19.601			
58.9	,,	"	- 3	A REST	1		STEEL ST	19.349			
64.6	,,	,,	1	18.8	0		THE STREET	18.897			
75.	"	,,	1	18.1	N. FR	I Bereit	STATE THE				
86.	"	,,	1	17.2	201						
92.	**	39	2	16.7							
97.	,,	,,	1	16.3	1000	1 2 2					
35502.4	,,	"	2	15.8	2	15.90	C. Santas	15.895			
08.8	,,	,,	1.530	STATE OF THE PARTY	ln	15.40		15.380			
14.0	,,	"		NEW TORK	ln.	19.98	7-180-6	14.962			
18.7	,,	"			0			14.602			
22.1	"	"	4.5	100	2	14.34		14.318			
24.	,,	22	2	14.2	1		The second second	MIGHTON TO			

OSMIUM—continued.

	Arc Spect	rum		Spark Spe	ectrum	Reduction to			
V	Vave-length		Inten-	Wave-	Inten-	Vacu	ıum	Oscillation	
		1 -	sity	length	sity	TI ST		Frequency	
V2 180 47 (54)	Rowland	Exner	and	_	and		1	in Vacuo	
Kayser	and	and	Cha- racter	Exner and	Cha- racter	λ+	λ-		
	Tatnall	Haschek	racter	Haschek	racter			1	
2813.904		2813.94	2	2010.0		0.80	10.3	35527.3	
70 100	. The state of the	A STATE OF		2813.8	2	"	"	29.	
13.130			0			"	,,	37.3	
11.683			2	308	-1	"	,,,	55.6	
10.680			0	10.7	1b	"	,,	68.3	
10.468		SE ELLE	0			"	"	71.0	
09.815		09.04	3	B 14.98.4		"	"	89.0	
09.045		09.04	0	08.8	2	"	"	92.	
08.357			0	00 0	2	"	"	97.7	
07.910		A STATE OF THE STA	0		S. Marin	"	"	35603.4	
07.025		07.03	4	dia di		"	"	14.6	
01 025		01 03	1	06.9	2	"	"	16.	
05.576		-	0	000	-	"	"	33.0	
04.185		04.19	2		1 3 4	"	"	50.7	
04.055		0110	ō	PAGE 1	-	"	"	52.3	
02.039			1	02.0	2 Pb	"	"	78.0	
2799-692			1 î			"	"	35707.9	
96.833		2796.84	2			"	10.4	44.3	
96.221			0			22	,,	52.2	
		Maria I	13.3	2795.9	2b	,,	,,	56.	
95.275	EGST TO		1			",	,,,	64.3	
94.309		94.30	1	94.2	In Pt	,,,	22	76.7	
94.091		94.10	1			,,,	,,	79.3	
92.844			0		2 37	,,	,,	95.4	
			100/12	92.1	ln	"	,,	35805	
91.007			2	THE HE		"	,,	19.0	
89.620		No. of the last	0			"	,,	36.8	
87.153		A FEBRUARY	1			39	99	68.5	
86.904		86.90	1	000		"	"	71.7	
	A PART OF THE PART	00.45		86.8	1	"	"	73.	
86.414	7.7	86.41	3	86.4	2	"	"	78·0 82·6	
86.061			2	07.0	1 D.	"	"	94.3	
85.147	Control of the last		2	85.2	1 Ba		"	99.	
		1 50 51		84·8 84·0	ln 2	"	9.9	35909	
82.658		82.69	2	82.7	2	0.79	"	26.2	
81.972		82.09	-	04.1	2		"	35.3	
01.912				81.2	ln	"	"	45.	
80.970			0	012	111	"	"	48.3	
80.269		Bur CEN	0	THE COLUMN	15 (18)	"	"	57.3	
79.584		1100	0.	H. H. H. S.	1	"	,,	66.2	
79.197			i	W. SEST	1 3 3 1 5	"	,,	71.2	
77.011	The second	77.01				,,	,,	99.5	
75.004	- 12	75.01	1	The same	THE REAL PROPERTY.	,,	10.5	36025.4	
74.488	100000000000000000000000000000000000000	74.50		A CONTRACTOR	47.77	,,,	,,,	32.1	
74.257	Leys Ezzi	74.25	1	The self		,,	,,,	35.2	
74.125	THE OWNER OF	74.13				,,	,,,	36.8	
73.592	100		0		THE R	,,	,,	43.8	
73.176	Curry Street	73.18			1	,,	"	49.2	
71.869	A LESS OF	1 250	0	1	N HENNE	,,	,,	66.2	
71.150	100	1	1	A CEL	A STATE OF	,,	.99	75.6	
70.825	A STORE	-	4		N 1482	>>	"	79.8	
70.213	A AND THE REAL PROPERTY.	70.22	1		1000	"	99	87.8	

OSMIUM—continued.

	Arc Spect	rum		Spark Spe	ectrum		tion to	
V	Vave-length	Like	Inten-	Wave- length	Inten- sity	Vac	uum	Oscillatio Frequenc
Kayser	Rowland and Tatnall	Exner and Haschek	and Cha- racter	Exner and Haschek	and Cha- racter	λ+	$\frac{1}{\lambda}$	in Vacuo
2769-975	500 Sept.	2770-00	1			0.79	10.5	36090-7
69.385			3		41.00	"	,,,	98.6
68.369		-/	0			99	"	36111.8
67.236		67.25	1			"	"	26.
66.650			1			"	"	34.3
65.541		65.55	1	2765.5	1	"	"	48.
65.143			2	65.2	2	"	99	54.0
64.637		04178	0	04.7		,,	99	60.6
04 000		64:15	2	64.1	1	"	"	67.0
64.032		04.05	2			"	"	68.8
63.371		64.05	1 2	00.4	2	"	"	68:
62.745	1	63.39	0	63.4	2	"	"	77.
61.530		61.54	2	61.6	2	"	"	36201:
61.184		61.21	1	01.0	2	59	"	05:
60.168		01.71	0			"	"	19:
58.923		58.95	1			"	"	35:
58.775		00 90	0			"	"	37.
57.902		57.91	1			"	"	48.
56.095		01 01	0		10 500	"	"	73.
55.680			0		2 11	"	"	78.
54.780			Ö		1	"	"	90-
53.792		53.83	1			99	"	36302
51.875		00 00	ō	P TO SEE		"	,,	28.
51.246		51.25	1	51.3	1	"	10.6	36.
50.970		32.0	Ō	020	150	"	"	40.
				50.6	1	"	"	45.
		N. Sangto	Trail	50.4	1	"	"	48.
De Per			100	49.4	2	"	"	61.
		49.30	1			"	,,	62:
			2 17	49.1	1	99	,,	65.
48.964		48.97	1			,,,	99	66.
48.003		48.01	1	48.1	2	,,	,,	79.
45.632			1			,,	99	36410
44.981			0		MA	,,	,,	19:
			to the	44.6	ln	,,,	"	25.
10.001				44.2	1	"	"	30.
42.801	The of the		0	10.0		"	"	48.
				42·6 42·3	1	"	"	51.
		41.50	1	41.5	1	0.78	"	55· 65·
40.862		40.84	1	41.0	1	170	"	74.
40.701		40.70	1	40.7	2	"	"	76.
40.414		40.42	1	40.4	2	"	"	80-
38.636		10 12	2	38.6	În	"	"	36503
38.427			0	000		99	"	06.
00 12.			EL ES	37.8	1	"	"	15.
		1000	10-515	37.5	î	"	,,	19.
The sale			1	37.1	i	"	"	24.
			1 1864	36.7	1n	"	,,	30.
36.479			1		Vietning.	"	"	32.
35.848		100	0			"	",	41.
32.905		32.90	3	32.9	2	,,	,,	80.
31.931		la cale	0	THE PARTY NAMED IN		"	"	93:

	Arc Speci	trum		Spark Spe	ectrum	Reduc		
7	Wave-length	- Harail	Inten-	Wave-	Inten-	Vaci	um	Oscillation
		1	sity	length	sity			Frequency
HENNY BUT	Rowland	Exner	and		and		1	in Vacuo
Kayser	and Tatnall	and Haschek	Cha- racter	Exner and Haschek	Cha- racter	λ+	$\frac{1}{\lambda}$	
2731.467	and long		1		1000	0.78	10.6	36599.8
				2731.38	4	,,	• ,,	36600.9
30.782			4	30.8	2	,,	,,	08.9
29.093			0	REPORT OF THE PROPERTY OF THE		"	,,	31.6
		2728.63	1	•		,,	"	37.8
28.364			2	00.0		,,	"	41.4
97.957		The state of	0	28.2	2n	,,	"	44.
27.357			0	23.8	ì	"	10.7	54.9
22.867			0	22.9	ln	"	10.7	36703.
22.700			0	22 5	111	"	"	17.5
21.959		21.97	3	22.0	2	,,	"	27.5
22 000		22.01		21.1	1	"	"	39.
20.578			1	1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1	Dian.	"	"	46.2
20.130		20.15	3	20.2	2	"	"	52.2
				19.2	1 Pt?	"	"	65.
		SIN-THE S	18 S.	19.0	1	,,	,,	68.
18.796	3-10-2 7-14		1	E N. ST.		,,	,,,	70.3
THE POPUL				18.6	1	,,	,,	73.
17.839			0	Bulling		,,	,,	83.2
17.488	- 150		0			,,,	,,	88.0
17.162	THE STATE OF THE S		0	100		"	"	92.4
	ALE STORY			16·0 15·9	1	,,	,,	36808
15.726		15.72	1	19.9	1	"	"	11.9
15.471	An expense	15.46	2n	15.5	1	"	"	15.4
14.997		10 10	0	100	-	"	"	21.8
14.744		14.74	2	14.7	2	"	,,	25.2
13.300			0			,,	,,	44.8
12.848			0		THE PARTY	,,	,,	50.9
			FIRST .	11.1	1n	,,	,,,	75.
	Fr. S		100	10.5	1	,,	"	83.
09.953	The Real Property lies	09.96	1	10.0	1	"	,,	90.3
00.000	THE RESERVE	00.07	15000	09.2	ln	,,	,,	36901
08.276	E Filmet	08.27	1	08.25	4	"	,,	13.2
07.519	1000	07.51	1	07.6	1	"	99	23·5 28·
06.804		06.80	2	06.8	1 2	"	"	33.3
00.004	1	06.04	1	00.9	2	"	"	44.2
05.547		00 04	0	05.6	ln	"	"	49.7
04.695	W. List	The same	9	000	111	"	"	62.0
04.551		04.55	1	1 1 1 1 1		"	,,	64.0
EGY -	The state of	0,000	1000	04.2	1	"	,,	69.
03.203	The second	1 1	0	03.2	ln	,,	10.8	82.3
	-	1 - 15 11	45 175	03.0	1	,,	,,,	85.
	- In - E Es	02.92	1	A STATE OF	HARRIE	,,	,,	86.2
	A SAINT OF		1000	02.7	1	,,	>>	89.
		1 2 2		02.6	1 Pt ?	"	,,	91.
	STORY OF B	02.50	1	07.1	13716	"	,,	92.0
00.040	1 1 1	00.00		01.4	1	"	"	37007
00.840	100	00.82	1	00.6	1	"	"	14.9
9800-690		9600.60	2	2699.7	1 2	"	"	18· 30·6
2699.688		2699.68	2	98.5	ln	"	"	47.

OSMIUM—continued.

	Arc Spect		SMIUM-	Spark Spe		Reduc	tion to	
Baral et a	Wave-length		Inten-	Wave-	Inten-		uum	Oscillation
Kayser	Rowland and Tatnall	Exner and Haschek	sity and Cha- racter	Exner and Haschek	sity and Cha- racter	λ+	$\frac{1}{\lambda}$	Frequency in Vacuo
2698·321			0			0.77	10.8	37049.3
	ME HEDE			2698.0	1	"	, ,,	54.
97.338		2697.34	1	97·6 97·4	1	"	"	59.
91.999		2097-34		97.0	1	"	"	67.
96.709			0			"	"	71.4
				96.4	1	,,	,,,	76.
04.054		04.00		95.0	1	"	"	95.
94.854		94.86	1	94.7	1	"	"	96.9
94.615		94.61	1	311		"	"	37100.3
01010		0101		92.9	2	,,	,,,	24.
92.790	108	92.77	1	T Paul T	EA	,,	,,	25.5
92.021			0	92.1	2	"	"	36.0
91·483 89·904		89.89	0 3	91·5 89·85	2 4	"	22	43·4 65·3
89.447		89.44	1	89.4	1 Cu ?	"	"	71.6
00 11.		00 11		89.2	ln	"	"	75.
88.174		88.18	1	88.2	1	"	"	89.1
87.277			0	87.3	1	,,	99	37201.6
86.777			0	86.8	In	"	99	08.5
86·624 85·973			0	86.0	1	"	"	10·6 19·7
84.497			2	800	1	"	"	40.1
83.974		avitado.	0		-	,,	"	47.4
			1 285	82.8	1	"	,,	64.
82.279		82.30	1	82.3	1	"	,,,	70.9
80.806		79.83	0 1n	79.8	1	"	"	91·4 37305·0
79·825 79·457		19.93	0	79.5	1	"	"	10.2
78.870			0	100		"	10.9	18.3
77.473			0	77.5	2	"	,,	37.8
74.969		75.00	2	75.0	2	"	"	72.5
74.793		F14.00	0 2	74.7	2	,,,	"	75.2
74.654		74.68	2	73.7	1	"	"	76·9 90·
				73.4	î	"	"	95.
72.145			0			,,	"	37412.2
				71.9	1	,,	"	16.
70.040		E0.00	1	71.3	1b .	,,	99	24.
70.640		70.66	ln	69.9	1	"	"	33·2 44·
69.606		69.61	1	69.6	1	"	"	47.8
69.158			0			"	"	54.1
67.593			0	67.6	2	"	,,	76.1
	T.			67.0	1	"	,,	84.
66.905	-N	66.31	ln	66.8	1	,,	,,	87· 94·2
66:295	21	00.91	111	66.2	1	,,	"	96.
66.079	18-2-	66.08	1n			"	"	97.4
65.370			0			,,	,,	37507.3
64.879	1		4	0.4 ~		,,	,,	14.3
64.390	Decision of		0	64·5 64·0	ln ln	"	,,	$\begin{array}{c} 21 \cdot 1 \\ 27 \cdot 3 \end{array}$
63.950	But I was a like		0	04.0	In)	,,,	,,,	213

OSMIUM-continued.

	Arc Spect	rum	- Nac	Spark Spe	ectrum	Reduc		Maria 1
	Wave-length		Inten-	Wave-	Inten-		uum	Oscillation
	Rowland	Exner	sity and	length	sity and	Line in	1	Frequency in Vacuo
Kayser	and Tatnall	and Haschek	Cha- racter	Exner and Haschek	Cha- racter	λ+	λ	
2663:314	Series Inches	Saw All	2	2663.3	6 Pb	0.77	10.9	37536.4
62.653		2662.63	1	62.6	1	,,	,,	45.8
62.069			2	62.0	1	,,	,,	53.9
		07.00	0	61.8	1	27	. ,,	58.
61.011		61.29	2	61.3	2	"	"	64·9 68·5
61·011 59·924		61·05 59·91	2	61.1	1 2	"	"	84.3
59-924		59.55	2 Pt ?	59.6	1	3.	"	89.4
58.682		58.69	3	58.68	6 Pd ?	,,	,,,	37601.7
57.203		30 03	0	30 00	oru:	,,,	,,	22.7
56.774		56.76	2	56.7	2	,,		28.8
00 111		00.0	THE STATE OF	56.3	In	"	99	35.
55.879		55.89	ln	55.9	1	"	"	41.3
55.297		55.29	ln	55.6	î	"	99	49.7
			PAPE.	55.3	1			50.
	- Interes		100 F	54.7	1	0.76	11.0	58.
53.860		53.86	1	53.8	1	,,,	,,	70.0
53.388		The same of the	1	53.3	1	,,	,,	76.7
53.068		53.06	1	53.1	1	,,,	,,	81.2
				52.5	1	,,	,,	89.
52.369			0	Fire Sally		,,,	"	91.1
51.562			0			,,,	"	37702.6
			NAME OF THE OWNER, OWNE	51.2	1	"	"	08.
FO BF4			0	51.1	1	"	"	09.
50.754			0	50.7	ln ln	99	"	14·1 29·
40.400		49.43	2	49.7	2 n	99	"	33.0
49.428		49.43	2	48.2	1	"	,,,	50.
47.817		47.82	2	47.8	2	"	"	55.9
11 011		47.00	2 Pt?	47.0	2 Pt?	"	"	67.6
		1,00	210.	46.4	1	,,	"	76.
				45.7	ln	,,	"	86.
45.207		1 5 5	0	45.3	ln	,,	,,	93.2
44.211	-	44.23	3	44.13	4	,,	,,	37807-2
43.727	1.00	43.74	1	43.7	1	,,	,,	14.3
43.132			1	100000	land.	,,	,,,	22.9
MALE S	100			42.8	1	,,	"	28.
41.700		1.00	2	41.6	1	,,	"	43.4
41.271		41.30	ln	41.3"	1	"	,,	49.4
40.625			0	40.6	2	,,	, ,,	58.8
40.079		1	0		1	,,	"	74.5
39.533			0	39.2	2	"	"	79.
38.428	HE END		0	38.4	2	"	,,,	90.4
38.428		38.10	1	38.0	1	,,	"	95.2
37.223		37.25	3	37.12	6	"	"	37907.5
34.547		34.55	ln	0.12	14	"	,,	46.2
34.375		34.38	ln	34.4	1	"	"	48.6
010,0		3100	DUTO-	33.2	Î	"	,,	66.
32.994	THE S. A. S.	32.99	1	33.0	1	,,	,,	68.6
The men				32.0	1	,,	,,,	83.
SAME		The state of	E B	31.4	1	,,	11.1	91.
100000	BASE E	Marie De	THE STATE OF	31.2	1	,,	,,,	94.
100000000	The state of		TIEST.	29.5	1	,,,	,,	38019

OSMIUM-continued.

	Arc Spect	trum		Spark Spe	ectrum		tion to	
MERCON,	Wave-length	The state of	Inten-	Wave-	Inten-	Vac	uum	Oscillation
	9,33	The Party of the P	sity	length	sity			Frequency
	Rowland	Exner	and		and		1	in Vacuo
Kayser	and	and	Cha-	Exner and	Cha-	λ+	$\frac{1}{\lambda}$	
	Tatnall	Haschek	racter	Haschek	racter		λ	
			Nervet.	2628.5	1 -	0.76	11.1	38032.5
2628-377		2628.56	2	28 4	1 Fe	,,	,,	35.2
				27.8	1	,,	11	44.
			1991-11	27.3	1	,,	21	51.
Part of the last			HOTE -	26.5	1	,,	,,	62.
25.436		2	0		DECEMBER 1	,,	,,,	77.8
24.677			0	24.7	ln	,,	,,	88.8
			THE THE	24.3	1	,,	,,,	94.
23.711			0	STATE OF THE PARTY		,,,	99	38102.8
				23.6	In	29	99	05.
				23.3	1	12	22	09.
21.912		21.95	2	21.9	1	"	99	28.7
21.473		21.50	1	21.5	1	,,	,,	35.2
20:723		20.75	1	20.7	1	,,,	"	46.1
20.035		20.05	3	20.1	1	,,,	99	56.2
70.000				19.5	1	29	,,	64.
18.923			0	13/11/18	William V	,,,	"	72.5
18.435			0	0		,,	. ,,	79.6
17.895			0	17.8	2	99	"	87.5
17.062		1000	0		100	99	99	38200.0
17 100		16.05	ln		- 10	,,	99	14.5
15:122		transa 9	0	The state of	N. B. L.	"	"	28.0
14.158		19.17	0 3	19.1		99	99	42.1
13.167		13.17	2	13.1	2	99	99	56.6
12.732		12.75	4	12.6	1	"	77	62.9
11.410		11.45	1	12.0	1	"	"	65· 82·1
10.881		10.89	2	10.8	1		1 2 3	90.1
09.669		09.67	2	100	1	0.75	99	38307.9
09.303		09.30	1				11.2	13.2
08.342		0000	o		17.5	"		27.3
00 012				05.2	1b	"	"	74.
05.051			0	002	10	"	79	75.8
04.701		04.70	i			"	91	80.9
03.554			Ô	HE WAS TO	130	"	"	97.8
03.323		03.30	1		100	"	"	38401.2
S-UT -		The state of the s	THE S	03.1	1	"	29	05.
02.444	1 3 1 3 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	02.43	1	NAME OF		"	>>	14.3
00.855	1	00.86	1			"	"	37.7
00.560	Sec. 3 (4)	00.56	1			,,	,,	42.1
00.003	The latest	00.03	1		Part I	,,	17	50.1
THE PARTY OF				2599.9	1	"	,,	52.
Den rei	TO STATE OF THE PARTY OF THE PA	2599.25	1	1500000	THE COL	,,	"	61.4
2597.990			0	97.9	1	"	,,,	81.4
97.664		97.69	1	07.5	13/4/2	"	"	84.7
	SELEN BOOK	07.00		97.5	1	"	"	87.
07 070		97.38	1	Escape of	P. YELL	,,	91	89.1
97.319	and Stone	97.32	1	to all and		"	,,	90.0
97.092		00.01	0	00.5	The same of	- 99	"	93.4
96.783	THE STATE OF	96.81	1	96.7	1	"	99	97.8
96.474		B 2	0	00.9	100	"	"	38502.6
06.101		06.11	1	96.3	1	"	"	05.
96.101	18/5/5	96.11	1	96.0	1	"	39	08.0
		1	1	30.0	1	99	99	10.

OSMIUM—continued.

Wave-length Intensity and Tatanall Exner and Tatanall Haschek Frequency in Vacuum Charles At 1 1 1 1 1 1 1 1 1		Arc Spect	rum		Spark Sp	ectrum		ction to	
Rowland and Tatnall Exner and Tatnall Exner and Tatnall Exner and Tatnath Ex	1	Wave-length					Va	cuum	
2594:238 2594:25 1 94:2 1 ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	Kayser	and	and	and Cha-	Exner and	and Cha-	λ+	$\frac{1}{\lambda}$	in Vacuo
92-082 92-10 1 92-7 1 " " 39-3		EN STATE					0.75	11.2	38511.
92-082 90-87 90-87 1 ", ", 59-90-859 90-87 2 ", ", 86-0 89-595 89-59 1 89-60 1 ", ", 38604-9 89-495 89-50 1 89-60 1 ", ", 38604-9 88-517 0			2594.25		94.2	1		,,	
92-082 90-87 2 90-7 2 " 86-0 89-595 89-59 1 89-6 1n " 38604-9 89-595 89-50 1 89-6 1n " 38604-9 88-517 89-50 1 89-6 1n " 35-04-9 88-959 89-50 1 89-6 1n " 35-04-9 88-959 89-50 1 89-6 1n " 36-04-9 88-959 89-50 1n 87-56 1n " 35-0 86-99 1 " 43-6 1n " 35-0 82-027 82-06 2 82-0 1 " 35-7 81-154 81-17 1 81-1 " " 36-1 82-027 82-06 2 82-0 1 " 36-1 79-839 0 2 80-08 4 " " 36-1 <	94 000			U	92.7	1			
90:859 90:87 2 90.7 2 " 88 88 88 89 89 50 1 89 6 1n " 38604·9 38604·9 88 1n " 38604·9 38604·9 38604·9 38604·9 38604·9 38604·9 38604·9 38604·9 38604·9 38604·9 38604·9 38604·9 38604·9 38606·9 38606·9 38606·9 38606·9 38606·9 38606·9 38606·9 38606·9 38606·9 38606·9 38606·9 38606·9 38606·9 38606·9 38606·9 38606·9 38606·9 38606·9 38606·9 38607	92.082		92.10						
89-595 89-590 1 89-6 1n " " 38604-9 88-617 0 88-4 1 " 11:3 20-9 87-575 87-56 1n 87-5 1 " 35-0 86-995 87-56 1n 87-5 1 " 35-0 86-995 88-90 1 " 35-0 43-6 82-027 82-06 2 82-0 1 " 35-0 80-120 2 82-06 2 82-0 1 " 38717-7 80-120 2 80-08 4 " 46-6 79-839 " 50-8 78-430 78-42 1 78-4 2 " 72-1 </td <td>90.859</td> <td></td> <td>90.87</td> <td>2</td> <td>00 111</td> <td></td> <td></td> <td></td> <td></td>	90.859		90.87	2	00 111				
89-495 89-50 1 """ 11-3 20-9 87:675 86-995 1 """ 11-3 20-9 86-995 0 86-9 1 """ 35-9 86-995 1 """ 43-6 82-027 82-06 2 82-01 1 """ 38717-7 81-154 81-17 1 81-1 1 """ 38717-7 80-120 2 80-08 4 """ 40-4 80-120 2 80-08 4 """ 40-4 79-839 0 """ 50-8 78-430 78-42 1 78-4 2 """ 72-1 78-284 78-26 1 """ 74-4 """ 74-4 77-141 0 """ 74-4 """ 74-4 """ 74-4 71-81 0 """ 74-4 """ 74-4 """ 71-21 74-852 1 """ 72-1 """ 74-4 """ 74-4 """ 71-21 """ 74-4 """ 74-4 """ 71-21 """ 74-4 """ 74-4 """ 71-21 """ 74-4 """ 74-4 """ 74-4 """ 74-4 """ 74-4 """ 74-4 """ 7	90.505		90.50	1					
88-517 0 88-4 1 " 23-23 87-575 86-995 0 86-9 1 " 35-0 86-995 86-91 " " 43-6 86-91 1 " 57-0 83-6 1 " " 57-0 82-027 82-06 2 82-0 1 " 38717-7 80-120 2 80-08 4 " " 30-9 80-120 2 80-08 4 " " 30-9 78-430 78-42 1 78-4 2 " " 70-8 78-384 78-26 1 78-4 2 " " 72-8 78-3601 0 " " 38801- " 38801- " 38801- " " 44-8 " " 44-8 " " 44-8 " " 44-8 " " 44-8 " " 70-8 " " 11-4 " " " "					00 0	111		"	
87-575 86-995 87-56 In 87-5 1 " " 35-0 86-995 86-91 1 " " 45-0 82-027 82-06 2 82-0 1 " 3871-7 81-154 81-17 1 81-11 1 " 38-0 80-120 2 80-08 4 " " 38-0 78-839 0 " " 30-9 38-0 78-430 78-42 1 78-42 1 " " 72-1 78-284 78-26 1 " " 72-1								11.3	20.9
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$			0= ×0				,,,	,,	
82-027 82-06 2 82-06 1 " " 38-70 94-94-94-94-94-94-94-94-94-94-94-94-94-9			87.56						
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	80.999			0					
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$\begin{array}{c ccccccccccccccccccccccccccccccccccc$			81.17					,,,	
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$				0	00.00	4			
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$			78.42	1	78.4	2			
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$			78.26						
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	77.141			0	F0.F	,		**	
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	74.852			1	70.9	1			
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$									
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$								1 1 1	
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$					71.0		"	,,	
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$			11.90		11.8	1			
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$			71.25		# TIME				
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$		1					,,		
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$			68.95		69.0	1		17.4	
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	07-555			U	67:0	1			
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	66-595		66.62					1	
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$			0 11 0 2						
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$						1	0.74	1	
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$			04.90					1	
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	63.257			2	63.3	2		1	35000.8
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$			62.78						
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$									
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$			THE STATE OF		# 1 (20 1)				
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$				1					
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	57.868				15 38 5				
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$		St. F.C.							
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$		MEE S			Q 21835				
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$			55.20	1	S. Sala				24.4
48.930 1 48.9 2 , 11.5 39220.6			54.55		1 10 10				
					18.0	9		11:5	
48.4 1 ,, ,, 29.	40 990				48.4	1			29.

OSMIUM -- continued.

	Arc Spect		Salon	Spark Sp		Pol		1.
7	Wave-length	A THE P	Inten-	Wave-	Inten-	Va	ction to	Oscillation
	D. 1. 1		sity	length	sity	7	1	Frequency
Kayser	Rowland and Tatnall	Exner and Haschek	Cha- racter	Exner and Haschek	and Cha- racter	λ+	$\frac{1}{\lambda}$	in Vacuo
2548.196			2	2548.2	1	0.74	11.5	39231.9
47.289		2547.80	1	47.7	1	,,	"	38.0
41 200			0	47.1	1	"	"	45·9 49·
				46.9	1	"	"	52.
46.261		46.25	1	46.2	ln	"	,,,	61.9
44.067			4	45·0 44·1	1 Cu ?	, ,,	,,	81· 95·4
43.892		43.90	i	43.9	î	"	"	98.3
40 700				43.0	1	"	"	39312
42.592		42.60	1	42.6	2	,,	, ,,	18.4
41.747			0	42.2	1	"	"	25· 31·5
138				41.6	1	"	"	34.
40.835		40.85	1	40.8	In	"	,,	45.5
40.230		40.05	,	40.4	1	,,	,,,	52.
39.751		40.25	1 0	40.2	1	"	"	54·9 62·4
The state of the s				39.0	1	"	"	74.
00 700				38.8	1	,,	"	77-
38·500 38·174		20.17	0			,,	,,	81.8
38.087		38·17 38·10	1 3	38.10	4	"	"	86·9 88·1
		00 10		36.8	In Zn?	"	"	39408
36.184			0			"	"	17.8
35·484 34·270		34.25	0	35.5	1	"	"	28.7
32.732		34.79	0			"	"	47·7 71·6
		32.53	ì	32.5	1	"	"	74.7
32.083			1	32.0	2	,,	"	82.
				31·5 29·6	ln 1 Cu ?	,,	11.0	91.
29.047			0	250	1 Cu:	"	11.6	39520-
27.832			1	27.8	1	"	"	48.0
27.335		05.15	0			"	,,	55.8
27·174 26·833		27.15	1 0			"	***	58.5
23 000				26.4	1	"	"	63.6
		26.10	1	26.1	1	"	"	75.1
24.879				25.4	1	,,	,,	86.
24.019				24.3	1	,,	"	94.3
				22.9	î	"	"	39603
20.156			0		PIE I	,,	"	68.5
19.886		19.86	1	19.9	1	,,	"	72.9
18.533		18.52	1	19·1 18·5	2 2	"	"	85° 94·1
18.006		18.00	î	18.0	1	"	"	39702.4
15.140		15.13	1	15.1	1	0.73	"	47.7
13·340 12·970		13·34 12·98	1 1	13.3	2	,,	"	76.1
12010		12.98	1	13·0 12·3	In Zn?	"	"	81.9
			53	10.8	1	"	11.7	39816
10.591			0	10.5	1	"	,,	19.6

OSMIUM—continued.

	Arc Spect	trum		Spark Spectrum		Reduct		F. Carrie
7	Wave-length		Inten-	Wave- length	Inten-	Vac	uum	Oscillation
	Rowland	Exner	sity	Tengun	sity	- 100		Frequency in Vacuo
Kayser	and	and	Cha-	Exner and	Cha-	λ+	1	111 11000
	Tatnall	Haschek	racter	Haschek	racter		λ	
2510.024		2510.04	1			0.73	11.7	39828.4
09.809			0		THE PARTY	"	,,	32.0
				2509.7	2	,,	,,	34.
08.707		08.71	1	•		,,	"	49.4
07.282			0	07.2	1	"	"	72.1
06·767 06·481			0	06.5	1	>>	"	80.3
04.603			0	00.9	1n	"	"	84·6 39914·8
04.003	· market and	04.59	1			"	"	15.0
04.486		04.49	1			,,	"	16.6
03.766		01 10	2	03.7	1	"	"	28.7
02.382		02:38	ī	00.	3718	"	"	50.2
01.963		02 00	Ô	The state of		"	"	56.9
01.016		01.00	1	TO SECOND		"	"	72.2
00.820		00.80	1			"	"	75.3
2498.512		00.01	1			"	"	88.1
		2498.50	2			,,	,,	40012.2
				2497.1	2	,,	,,	35.
96.425			1			,,	,,	45.6
300 300		and the last	913,	95.1	1b	,,	,,	69.
93.935			0			,,	11.8	85.5
93.710		93.70	1			"	,,	89.2
		00.40	1800	93.6	1	,,	"	91.
92.477		92.46	1	92.5	1	"	"	40109.1
01.700		91.76	1	92.1	1	,,	"	15· 20·2
91·789 91·106		91.11	1			"	"	31.0
31.100		31 11	-	90.7	1n	"	"	38.
		100000		89.7	î	"	"	54.
89.370		130000	0	89.3	2	"	"	59.6
89.113		Da Esta	0		P 8	"	"	63.1
88.890	- 12	6 3	0			"	22	66.8
88.640		88.64	3	88.65	4	"	,,	70.8
88.415		Para Land	1			27	"	74.4
				88.3	1n	,,	,,	76.
86.326		86.33	2	86.3	4 Zn	"	"	40208.2
				85.7	1	"	"	18.
85.424		de de la	0	07.6	13 V - 18	,,	"	22.8
		H LES CO		85.3	1	"	,,	25.
		Supla 3	1	84.3	ln l	"	"	41.
				83·4 82·8	1	**	"	65.
82.524		82.50	1	82.5	1	"	"	70.0
81.892		81.89	1	81.9	1	"	, ,,	80.1
80.825		31 03	0	010	1000	"	"	97.4
00 020		A STATE OF	San S	79.9	1	"	"	40312
77.100			0	The state of the s	-00/1	"	"	58.0
76.923		76.93	1	76.9	2	"	,,,	60.8
76.179		MAY EL SE	0		13500	,,	11.9	72.9
75.769			0			,,	"	79.6
75.064	VENT-		0	75.1	1	,,	"	91.1
		I de la		74.9	1.	"	"	94.
			18115	74.1	1	,,,	,,	40407

OSMIUM—continued.

	Arc Spect	rum		Spark Spe	ectrum	Reduc	tion to	
V	Vave-length		Inten-	Wave- length	Inten-		uum	Oscillation
Kayser	Rowland and Tatnall	Exner and Haschek	sity and Cha- racter	Exner and Haschek	sity and Cha- racter	λ+	$\frac{1}{\lambda}$	Frequency in Vacuo
2473.756		- 15 m	0			0.73	11.9	40412.6
				2473.6	1	,,	99	15.
				73.3	1	,,	,,	20.
170.070		0.450.05		72·9 72·4	1	,,	"	26.
70.925		2472:37	1 0	12.4	1	"	"	35·0 58·8
10 920			0	70.8	1	,,,	"	61.
A STATE OF		5-40 BT		70.5	î	"	"	66.
				70.2	1		"	71.
To The Later				69.6	1	0.72	71	80.
00.000	B. Carrier	The state of		68.92	4	,,	,,	92.
68.209	HS I SU	1 1 10	0			,,	27	40503.3
67·420 66·535		LITE AR	0	1 8 3		"	"	16·3 30·8
00.939			0	65.3	2	"	"	51.
64.577		64.59	ln	000	MAN S	"	"	62.9
DESCRIPTION OF THE PERSON OF T		64.11	In			"	,,	70.7
61.508		61.51	2	61.5	2	,,	29	40613.6
59.940			0		WIE ST	25.	12.0	39.4
W= 00.				58.8	1	>>	99	58.
57.804			0	EH.H	0	"	"	74.7
57-273			0	57.7	2	"	"	76· 83·5
56.555		56.55	1			"	"	95.4
55.716		0000	ō	The second	DENTAL ST	"	"	40709.3
55.422			0	The RESERVE		,,	,,	14.2
				55.1	2	"	,,,	20.
55.002			1			"	99	22.2
54.278			0	54.7	1	"	"	26· 33·2
53.989		54.00	1	54.0	1	"	,,,	37.9
00 000		34 00	1	53.5	2	"	23	46.
53.392		N. S. B. II	0			,,	,,	47.9
52.869			0		7 S	"	97	56.6
			Trans.	52.7	1	"	,,	59.
		51.84	1	W1 F		,,	,,	73.7
THE PARTY OF		TO THE LAND		51.7	1 2	,,	,,,	76· 81·
51.290		St. In the	0	51.4	-	"	"	82.8
50.833	2450.83	50.85	1	50.8	2	"	"	90.3
50.581	2100 00	00 00	0	300		"	"	94.6
49.987			0		They're	"	"	40804.5
				48.5	1	"	"	29.
	Part of the		1000	47.4	1	,,	"	48.
10 105		10.11		46.4	ln 1	"	,,,	64· 69·1
46·125 45·980		46·11 46·00	1	46.1	1	,,	"	71.4
45.990		40.00	1	45.2	In Zn?	"	"	84.
			F 5 10	44.6	1	"	"	94.
				44.3	ī	"	"	40900
		Editor (1	43.8	2	"	12.1	08
42.104		1 - 1 - 1	0		PARE	"	,,,	36.2
		1	0	41.1	1	"	"	53· 56·2

OSMIUM—continued.

	Arc Spect	rum		Spark Spe	ectrum	Reduc	tion to	
SE NEW	Wave-length		Inten-	Wave- length	Inten-	Vac	uum	Oscillation
Kayser	Rowland and Tatnall	Exner and Haschek	sity and Cha- racter	Exner and Haschek	sity and Cha- racter	λ+	1_	Frequency in Vacuo
2 1 0 Av -				2440.8	2	0.72	12.1	40958
				40.5	1	,,	, ,,	63.
2437.798			0	-0		"	,,	41008.5
34.731			0	•35.7	1	"	"	60.2
34.605			0		A 53	"	, ,,	62.3
				32.9	2	,,	"	91.
31.699		2431.70	1	31.7	1	,,	**	411111.4
31.299		31.30	1 0	31.3	1	"	,,	18·2 43·5
29·801 29·025	A SECOND		0		1 3 3 3	"	"	56.7
20 020				28.4	1	"	,,,	67.
27.997			0	28.0	2	,,	12.2	64.0
27.386			0	PART IN		,,	"	84.4
27.280		22.00	0			"	,,,	86·2 92·6
26.907		26.90	1 0			,,	"	41202.9
26.297		25.06	1	25.1	2	"	"	23.9
24.820	THE ST	24.82	î			"	"	28.0
24.655		24.67	1	24.7	1	,,	"	30.7
				24.2	2	,,	, ,,	39.
24.102			0 2	23.13	4	"	"	40·2 56·3
23·158 22·106			0	23.13	4	"	"	74.2
21.949			0			0.71	"	76.9
				21.7	ln	,,	,,	81.
21.268			0			"	,,	88.5
00.705			0	20.7	1	,,	"	98.
20.137			0	20·2 19·8	i	"	"	14.
18.618		18.61	1	18.6	î	"	,,	33.8
18.457			0			,,	"	36.5
18.081		18.07	1	18.1	1	,,	"	43.0
75 100			0	16.8	1	,,	"	65· 88·2
15·436 14·639		14.63	ln	15·5 14·7	1	"	,,,	41401.9
14.039		14 00	0	14.1	î	"	"	09.4
14.042		1 201	0		PER.	,,	,,	12.1
11.992			0			,,	12.3	47.2
11.536			1	THE REAL		" "	"	55·0 76·6
10.282			0	09.6	2n	,,	,,	88.
09.476			0	000	211	"	"	90.5
09.010			1			,,	,,	98.5
08.764		08.76	1	10 213 6		,,	,,	41502.8
06.053		06.06	ln	100 Parts		,,	,,	49·5 58·2
05.531		05.55	1 0			,,	"	64.7
05.176		03.95	1			"	"	86.0
02.620		00.00	0	FINE SE		"	, ,,	41608.9
02.328		02.31	1		1	,,	,,	14.1
01.219		01.23	1	01.2	2	,,	,,	33.1
2398.300		J. C. S. F. W.	0		11 -1-	1,,	"	83.9

OSMIUM—continued.

	Arc Spec	trum		Spark Sp	Spark Spectrum			
	Wave-length		Inten-	Wave- length	Inten-	Vac	uum	Oscillation
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Rowland	Exner	sity	Tong un	sity	21-436	G. 18 - 3	Frequency in Vacuo
Kayser	and	and	Cha-	Exner and	Cha-		1_	III vacuo
11 wy sci	Tatnall	Haschek	racter	Haschek	racter	λ+	λ	
2397.730	ASAL CHI		0			0.71	12.4	41693.7
96.855		2396.88	ln			,,,	,,	41708.7
95.969		95.99	1	2395.9	1	,,	,,	24.2
94.379	Te Ten	94.40	1	94.4	1	,,	,,	51.9
93.986			0			,,	,,	58.9
		1500	THE R	92.6	1	,,	,,	83.
07.040				91.9	1	"	,,	95.
91.248			0	0= 4		"	,,	41806.8
87.378		87.37	1	87.4	1	"	,,	74.6
04.715		04.77	1	86.1	1	"	"	97.
84.715		84.71	1	84.7	ln	"	10 =	41921.4
82.595		Paris and	0	83.2	ln	**	12.5	48.
79.931		79.90	ln			"	"	58·5 42005·8
79.730		79.70	ln ln			"	"	
79.482	0.00	79.46	1	79.5	1	"	"	09·3 13·6
78.842		19.40	0	78.9	1	29	"	24.8
10 042			0	78.6	1	"	"	29.
77.704	1550 AL	77.66	1	77.7	1	"	"	45.3
77.128		77.11	1	77.2	2	"	,,,	55.2
76.398			ō	1.2	-	"	"	68.0
10 000				76.2	1	"	"	71.
-Mar 613		F IZ I IA		75.2	2	"	"	89.
100000		1	1	74.8	1	"	"	96.
				73.0	ln	0.70	"	42128
				72.0	1	"	,,	46.
71.270		71.27	1	71.3	1	,,	,,	59.0
70.796		70.79	1	70.7	1	,,	,,,	67.4
69.346		69.34	1	69.3	1	,,	,,	93.3
67.434		67.46	1	67.40	6	,,	12.6	42227.0
63.421			1		E W	"	,,	98.9
63.128			0			**	,,	42304.2
62.855		62.85	1	2000	Post 3	,,	,,	09.1
62.498	in harmonia and	62.50	1	FO. F.		"	, ,,	15.5
				58.7	2	"	"	84.
57.344	Minus Mark	57.35	ln	57.9	1	"	"	98· 42408·0
56.999		57.00	ln ln	10 La -120	1000	"	,,,	14.2
55.378	R. Carrier	37.00	0	55.4	2	"	"	43.4
00 010	Date of the	53.10	1	00 4	-	,,	12.7	84.4
51.826	HEWE HE	05 10	0			"	11-11	42507.4
51.678		1	0			"	"	10.1
50.323		#100 M	0	50.3	2	"	"	34.7
47.480	- 12 H 3:1/4	47.50	1		110000	"	"	86.0
45.855			0	H WELL IS		"	"	42615.7
43.831			1	43.9	1	"	"	52.5
42.043			0			"		85.1
40.732	-9		0			"	12.8	42708.9
38.723	MARKET STATES		1			,,	,,	45.6
36.876		36.89	ln	N. Steel		,,	,,	79.2
34.640			1			,,	,,	42820.4
99.963		THE REAL PROPERTY.	134	33.0	1	"	"	50.
32.288		THE BY	1	DESCRIPTION OF		"	"	63.5
29.356	COLUMN TO A SHAPE OF THE SHAPE		0			22	,,	42917.5

OSMIUM-continued.

	Arc Spect	trum		Spark Spe	ectrum	Reduc		
	Wave-length		Inten- sity	Wave- length	Inten- sity	Vac	uum	Oscillation Frequency
Kayser	Rowland and Tatnall	Exner and Haschek	and Cha- racter	Exner and Haschek	and Cha- racter	λ+	$\frac{1}{\lambda}$	in Vacuo
2327·081 25·636		2324·37 24·07 08·40 2283·76 82·35	0 0 1n 1n 1n	2320·4 13·9 06·2 05·0 93·7 88·2 86·6 85·6 85·0 83·3 82·41 79·2 77·4 72·6 70·8 58·5 52·2	1 2 2 1 1 1 1 1 1 1 2 2 1 1 1 1 1 2 2 1 1 1 1 2 2 1	0·70 0·69 ,, ,, ,, ,, ,, ,, ,, ,, ,, ,, ,, ,, ,,	12·9 " " 13·0 " " 13·1 13·2 " " " " 13·3 13·4 " 13·5 13·8	42959·4 86·1 43009·5 15·1 83· 43204· 43307·1 43585· 43689· 43720· 39· 50· 74·2 \$83. 43801· 62· 97. 43989· 44024· 44264· 44388· 44411·8 45348·

RHODIUM.

Kayser, 'Abhandl. Königl. Akad. Wissensch. Berlin,' 1897. Rowland and Tatnall, 'Astroph. Journ.,' iii. p. 286 (1896). Exner and Haschek, 'Sitzber. kais. Akad. Wissensch. Wien,' civ. p. 960, cv. p. 561.

Snyder, 'Astrophysical Journal,' xiv. p. 179 (1901). Exner and Haschek, 'Wellenlängen Tabellen der Bogenspektren der Elemente,' Leipzig und Wien, 1904, p. 126. Adeney, Photographs Ultra-violet Spark Spectra, 'Trans. Roy. Dublin Soc.' (2),

vii. p. 331.

		Arc Spect	rum		Spark Spe	Reduction to						
-	7	Wave-length			Wave-length Intensity		Inten-	Wave- length	Inten-	Vacuum		Oscillation Frequency
	Kayser	Rowland and Tatnall	Exner and Haschek	and Cha- racter	Exner and Haschek	and Cha- racter	λ+	$\frac{1}{\lambda}$	in Vacuo			
	5983·830 52·791 41·743 18·698 07·478 5899·128 71·947			4 0 1 1 1 1 1			1.63 1.62 "1.61 "1.60	4·5 4·6 ,,	16707·2 94·2 16825·5 91·0 16923·1 47·1 17025·5			

RHODIUM—continued.

	Arc Spect	rum		Spark Spe	ectrum	Reduct	tion to	
7	Vave-length		Inten- sity	Wave- length	Inten-	Vacı	aum	Oscillation Frequency
Kayser	Rowland and Tatnall	Exner and Haschek	and Cha- racter	Exner and Haschek	and Cha- racter	λ+	$\frac{1}{\lambda}$	in Vacuo
5833.808	Will the second	45.50.5	ln			1.59	4.7	17136-8
31.730			4	F. STEEL		,,	,,	42.9
21.991			2			1.58	"	71.6
07.058			4			28t A.	11	17215.7
03·482 5797·668			2 2		M TON	"	"	26·3 43·6
95.936		4.5	2			"	"	48.8
92.824			4			"	"	58.0
55.894			0			1.57	,, ,	17368.8
42.985			0			,,,	,,	17407.9
30.600		TOTAL SE	2	THE DATE OF		1.56	>>	45.5
27·466 26·875			3 1n	and the state of		"	"	55·0 56·8
18.038			0			"	4.8	83.8
13.799			ln			"	"	96.8
08.930			On		T LEWY	"	"	17511.7
00.628			4n			1.55	>>	37.1
5695.823			1	DE LE		,,	,,,	51.9
86.543		1 5 6	4		A 15.5	"	,,	80.6
59.924			2n			1.54	,,	17663.3
59·791 51·466		12 10 2 3 4	4 ln	a distinct		"	"	63·7 89·7
34.847			2	Its and		"	"	17741.9
32.954			2	100	1000	"	"	47.9
26.254		10.50	2			1.53	"	69.0
08.541			4 .			"	4.9	17825.0
07.898			3			99	99	27.1
05·214 5599·620			0 6n		B 18.3	"	"	35.6
95.043			2n			"	"	53·5 68·1
68.495		District For	0			1.52	99	17953.3
57.364		H. House	ln			"	"	89.2
56.968			3		-	"	,,	90.5
55.288		1.3	0		1000	,,	,,	96.0
44.797			6b			1.51	"	18030-0
42·260 35·235		The state of	0 5n			"	90	38·2 61·2
34.074	1= 1000		ln		100 E	99	"	65.0
04.845	3		4n	Little Barrie		1.50	5.C	18160.8
03.776	A STATE		2n			,,	"	64.3
5497.197			0	R. 1-25 (2)		,,	,,	86.2
92.048		Feed 18 de	2n			"	"	18203-1
84·421 81·602			4n 2n			"	22	28.5
80.997			0			"	99	37·8 39·9
75.318		E askiril	2n			1.49	"	58.8
71.040		HOUSE AND	5n		ALVE DE	,,	"	73.0
68.921		A COLUMN	2n		1	,,	"	80.1
68.288	The books		3n		1000	,,	"	82.2
45.424	San Trade Charles		4n		1000	,,	,,	18359.0
44·508 41·547	05615		2n 4n		TIES IN	"	"	62.1
39.783		1	411	1000	Ema	1.48	"	72·1 78·1
32.224	7 - F 21		2n			1 40	"	18403.7

S

RHODIUM-continued.

	Arc Spect	rum		Spark Spe	ectrum	Reduct		Oscillatio Frequence in Vacuo
Kayser	Wave-length Rowland and	Exner	Intensity and Cha-	Wave- length Exner and	Intensity and Cha-	Vaci	1	
THE REAL PROPERTY.	Tatnall	Haschek	racter	Haschek	racter	10.00	^	
5431.813	THE PERSON		2n			1.48	5.0	18405-1
25.636			2n 4n					26.0
24.910			4			"	"	28.5
23.483			2n			"	"	33.3
08.972			2	THE REAL PROPERTY.		"	"	82.8
04.898			4n		19 119	"	"	96.
5390.622			5			1.47	5.1	18545
84.214			0			12.7		67.
81.683			0			"	"	76.4
79.275			5			"	"	84.8
69.470			1	La Company		>>	"	18617
64.290			0			"	"	36.
						1.46	"	52.
59.850			0				"	63
56.638			3			"	"	70.
54.573			7			99.	"	88.
49.463			2			. ,,	"	18722
39.845	250		0			"	- "	32.
36.794			0			"	"	52
31.237			2 4	160000000000000000000000000000000000000	1161333	"	"	57.
29.890			4			"	,,,	58.
29.571			0	The Mark		1.45	"	18809
14.911			3			1.45	5.2	90.
5292·279 80·250			4 2			1.44		18933
69.429		LEE WA	3		1 3 1		"	72
68.092			0			"	"	77.
						* **	"	19008
59.382			3	1 38 9		"	"	36.
51·549 48·918			2n	1		1.43	"	46.
			0			To least the	"	86.
37·918 37·284						**	,,,	88.
30.752			5 4			"	"	19112.
25.706		DIAMETER ST	1	The state of	1.72	"	, ,,	31.
22.783			4	Utawa Car		,,	"	41.
14.913			3	- TO STATE OF		"	"	70.
13.491			2	The second of		"	37	75.
12.866			4	13 SE X 04		1.42	"	78
11.637			4		100		"	82
07.099			3			,,	5.3	96
03.468			2	The second		**		19212
5197.697	M. Est		1	ALL MARKET		,,	"	34
93.276			7			"		50
87.088			ó			"	"	73
85.172	No. of the last of		1		1000	"	"	80
84.342	THE REAL PROPERTY.		4	The second	1 3 - 1 2	"		83
78.311	STEEL STEEL		0		1018	"	"	19306
77.396	C SERVICE		3	12.1	1	"	"	09
76.110			6		1919	"	,,	14
74.883			0	The Indian	1 3 3 6 1	1.41	"	18
65.561			0	17.34	1		"	53
60.464			On	THE LOCAL PROPERTY.	134	"	"	72
57.814	19		5		E E	"	,,	82
57.224	A CONTRACTOR OF THE PARTY OF TH		2	The state of		"	"	85
55.691	THE PERSON		5		1	99	"	90

	Arc Spect	rum		Spark Spe	ectrum	Redu	ction to	
	Wave-length		Inten- sity	Wave- length	Inten-		uum	Oscillation
Kayser	Rowland and Tatnall	Exner and Haschek	and Cha- racter	Exner and Haschek	sity and Cha- racter	λ+	$\frac{1}{\lambda}$	Frequency in Vacuo
5145.110			2			1.41	5:3	19430.6
30·903 20·824			. 2			1.40	"	84.5
10.115			1 2			,,	"	19522.8
5090.795			5			1.39	5.4	63.6
88.949			0				"	19637·9 45·0
85.676			4			"	"	57.7
73·607 64·475			0			,,	"	19704.4
57.576	是 流		4 2	I SAME		"	,,	40.0
46.583			2	Sale Y	P. T.	1.38	"	66.9
28.492			2 2			"	"	19810·0 81·3
25.692			1			1.37	5.5	92.2
12·538 4997·919			0			,,	,,	19944.5
96.012			1 0			,,	- ,,	20002.8
85.107			2	The second		1.36	,,	10.5
77.969	San Learn		4				"	54·2 83·0
66.511			2			"	99. 99	20129.4
63.831		1	4			,,	"	40.2
60.318		1 1 2 3 1	0	To Part	OFF S	"	,,	51.7
44.975			2			1.35	,,	54.5
22.633			2				5.6	20217·1 20310·6
19.821	E TO THE		2		MA 1	"	,,,	20310-6
18·953 13·649		20 10 10	2		700	99	,,,	23.9
08.744	785		2 2			1.34	22	45.9
4898.022			1			- "	"	66.2
88.045	THE WAY	-19-11	ō			"	"	20410.8
65.922	te la sec		4	100	2-12	1.33	"	52·5 20545·5
61.808	ALL DE LEGISLA		On			"	5.7	62.8
56.614			2n		BILL !	"	,,	64.1
51.777			0 6		100	"	,,	84.8
44.145			6		Selection of	"	"	20605.3
42.556	-0		4		HE	"	"	37.8
33.627			0	4		1.32	"	82.7
17·233 13·678	-		0			,,	"	20753.1
10.645			1 6		Sept. 1	"	,,	68.4
03.393			0		HALL S	1.31	,,	81.5
01.517	20 15		ln	100	PCULT !		"	20812.9
4798.829	115	The detroit	4		DES.	"	"	32.7
94·364 91·640	21		0	THE PERSON		,,	"	52.1
91.164			0 3		Maria 1	. 29	,,	64.0
77.304	5 - Sur		2	1 - 6	1	"	"	66.0
71.687	E. P. C. Sept.	NEW THE	2			,,	5.8	20926.5
70.938	7 5 0		3			"	"	54.4
55·717 50·007	de 12		4			1.30	"	21021.5
45.276	2		0	F rates to		,,	"	46.8
31.333	\$ 11 C	in a little	6 1n		100	"	"	67.8
	The Late of the La	STATE OF THE PARTY	III			,,	,,	21129.9

	Arc Spect	rum		Spark Spe	ctrum	Reduc	tion to	
V	Vave-length		Inten-	Wave-	Inten-	Vacu	ıum	Oscillation
	D11	E	sity	length	sity	112	1	Frequenc
77	Rowland	Exner	Cha-	Exner and	Cha-	λ+	1_	in Vacuo
Kayser	Tatnall	Haschek	racter	Haschek	racter	Α,	$\frac{1}{\lambda}$	
4724.483	THE R.		2	The same	5	1.29	5.8	21160-6
21.148			6			99	,,,	75.5
19.545			2	5. te		, ,,		82.7
07.108			ln	note, 155.		,,	5.9	21238-6
04.230			5	See p.		99	,,	51.6
4696.463			1	00		,,	,,	86.7
89.610			1	100		1.28	"	21317.8
		Res to l'Auto		4686.0	1n	"	,,	34.
83.093		4683.15	ln	83.0	ln	99	,,	47.4
				81.7	ln	"	99	54.
77.532		77.55	ln	77.6	ln	99	,,,	72.9
75.187		75.20	10	75.2	2	,,,	22	83.0
66.261		40.00	2			"	,,	21424-6
43.337		43.35	3			1.27	"	21530-3
39.526		39.53	2n	40.5	ln	"	"	48.0
34.017		34.05	In		912	,,	6.0	73.5
26.105		26:12	1n	00.0		29	,,	21610.4
00.000		90.07		20.2	ln	"	"	38.
20.059		20.07	3	00.0		7,00	"	38.7
08.294		08.30	4	08.3	2n	1.26	99	94.0
01.792		01.82	1			,,	"	21724
4599.553		4599.6	ln l	AFROR		1.25	,,,	35.]
72.794		72.81	1	4572.7	1 .		"	21862.4
71.400		71.48	2	72.5		"	,,,	68.8
71.466		70.51	ln	71.6	1	"	. 22	73.4
69.181	4569-184	69.19	6	69.3	2	"	"	79.7
68.538	4000 104	68.55	1	033	2	"	"	82.8
65.373		65.37	3	65.3	1	"	" "	98.0
00.313		00 31	0	63.0	i	"	6.1	21909
61.062		61.08	3	61.0	î	"		18.8
58.897		58.90	3	58.9	î	22	"	29.0
57.343		57.35	2n	57.3	În	"	"	36.
51.828		51.83	4	51.8	1	"	"	63.
02 020		48.89	3	48.8	î	99	"	77:
44.447		44.45	3	44.6	î	**	"	98.
30.763		30.77	1	30.9	ī	1.24	17	22065
28.904	28.901	28.91	9	29·0b	4	,,	"	74:
			1.553	25.5	1	"	,,	91.
RIPER S		The second		08.0	ln	,,	"	22177
06.815		06.83	1	06.8	ln	99	,,	82:
03.955	03.955	03.96	3	04.1	1	1.23	,,	96.
4492.644	4492.643	4492.65	4	4492.7	5	,,	6.2	22252
84.015		84.00	2	84.0	1	"	,,	95:
		Steel Ly	1	78.3	ln	"	"	22324
1		4	1000	48.5	1b	1.22	,,	22473
	00.100	00 =0		43.5	1b	27	"	99.
33.495	33.489	33.50	3	33.6	1	"	"	22549
1			17.53	26.6	1	1.21	6.3	84.
24.22	04.000	0100		26.3	1	"	"	86.
24.215	24.217	24.23	2	24.3	1	,,	"	96.
23.835	23.824	23.84	1	E ZEINE		,,,	,,	98.6
21.383		21.38	ln		The second second	99	, ,,	22611.1

	Arc Spect	rum		Spark Spe	ectrum	Reduction to		
1	Wave-length	-64	Inten-	Wave- length	Inten- sity	Vac	uum	Oscillation
	Dowland	Funor	and	Tongon	and	Trait		Frequency in Vacuo
Kayser	Rowland	Exner	Cha-	Exner and	Cha-	λ+	$\frac{1}{\lambda}$	III Vacuo
itaysei	Tatnall	Haschek	racter	Haschek	racter		λ	
4410-449	Part _ tris	4410-45	ln			1.21	6.3	22667-1
				4405.8	ln	,,	99	91.
02.725	4402.716	02.74	1		F. S. I.V.	99	99	22706.9
4388-224	4388-215	4388-24	2	4388.2	1	1.20	,,,	82-0
80.097	80.082	80.11	8	80.1	ln	"	"	22824.2
				79.2	1	"	99	29.
=0.0×0	#0.04F	#0 OF	LINE TO	77.0	ln	"	99	40.
76.350	76.347	76.35	1	ne.0		"	99	43.8
E4 0E0	F4 001	ar.00	10r	76·2 74·9b	1 8	99	"	45· 50·9
74·976 73·212	74·981 73·212	75·00 73·22	6	74.90	0	**	"	60.2
13.212	13.212	15-22	0	72.5	2	"	"	64.
				64.0	ln	"	6.4	22908
62.393		62.40	ln	04.0	111	"		16.8
49.336	49.333	49.32	2			1.19		85.6
45.629	45.626	45.62	3	AT AT AT			39	23005.2
45.247	45.245	45.25	2	45.3	1	"	99	07.
42.608	42.604	42.60	4	40 0	100	**	19	21.3
42 000	42 004	12 00	-	42.5	1	"	,,	22.
				39.5	În	**	99	38.
36.181	36.176	36-19	1	000	***	"	23	55.4
90 101	00110	00 10	THE OL	28.8	1b	"	99	95.
25.584	25.578		1	200	1	99	99	23111.9
20 001	200,0		Marie S	23.2	1b	99	,,,	25.
				20.0	ln		•••	42.
				17.3	ln	1.18	"	56.
15.126	15.123	15.14	3	15.2	1	,,	,,,	67.9
				13.6	1b	,,	99	76.
				10.7	1	,,	**	92.
08.982	08.988	08-99	2	09.0	1	**	6.5	23200.8
				20.7	ln	>>-	••	45.5
4296.926	4296.931	4296.93	5		1781	99	••	65.9
		1035	- 31	4296.8	4	"	••	67.
88.883	88.867	88.89	10r	88.8p	8	91	,,,	23309.6
				84.6	ln	"	99	33.
				82.0	lb	1,17	,,,	47.
FO.F.4.4	BO. BET	FO.F4		79.3	ln	1.17	>9	62.
78.7.44	78.755	78.74	4	78.7	2	99	"	64.8
78.000	70.074	76.97	2	78·2 77·0	1	"	**	74.5
76.962	76.974	10.91	2	76.5	ln	"	"	77.
				76.1	ln	"	99	79.
			1 1/2-	74.8	ln	"	99	86.
73.578	73.581	73.59	4	73.5	2	"	"	93.1
10010	13 001	10 00	DATE:	72.4	i	"	"	23400
70.696		70.72	2	70.7	i	"	99	08.8
.0000		.0.12	178	69.7	ln	99	"	14.
	TO THE	D-18		69.2	1	"	,,,	17.
	The San I	19 3 (4 5)		65.3	ln	"	99	39.
	No. 1 Act			64.5	ln	29	"	43.
	100	100		63.8	ln	,,	,,,	47.
	1 1 1 1 1 1 1	200	WE!	62.3	ln	99	90	55.
124	60.708		P. C.	60.7	1 Fe	90	99	63.8
	The second second	A CONTRACTOR OF THE PARTY OF TH		60-1	In	1		67-

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RHODIUM—continued.

	Arc Spect	rum		Spark Spe	ectrum	Reduc		
THE T	Wave-length		Inten-	Wave-	Inten-	Vac	ıum	Oscillation
			sity	length	sity	-		Frequency
	Rowland	Exner	and		and	1	1	in Vacuo
Kayser	and	and	Cha-	Exner and	Cha-	λ+	λ	1
	Tatnall	Haschek	racter	Haschek	racter		^	
				4259.7	1n	1.17	6.5	23469
				59.3	ln	,,	,,	72.
4258.608	4258-617	4258-62	ln			"	,,	75.3
				58.4	ln	,,	,,	76.
				56.6	ln	"	"	86.
			188 1	56.3	1	,,		88.
	Library Tolk			. 52.7	1n	91	6.6	23508
				49.1	1	,,	,,,	28.
				48.0	1b	"	19	34.
			100	45.4	ln	99	"	48.
				44.7	2	,,	,,	52.
44.598	44.599	44.60	3	State of the last		91	"	52.7
				32.7	ln	1.16	,,	23619
			1000	32.3	ln	"	,,	21.
30.354	30.358	30.36	2	30.3	1	,,,	,,	32.1
28.002			0			,,	,,	45.2
			2.3	21.5	1	,,	"	82.
	21.362		1	Land Market		"	"	82.4
				21.2	1	"	"	83.
		Section 1		20.0	ln	,,	,,	90.
18.142	18.153	18.15	1	18.2	1	,,	,,,	23700-8
11.306	11.304	11.26	20r	11·4b	10	99	,,	39.1
06.770	06.777	06.75	3	06.7	2	91	, ,,	64.6
		4400.00	1	04.1	ln	1.15	"	80.
4196.672	4196-661	4196.68	7	4196.6	6	99	6.7	23821.7
				95.7	1b	• • • • •	,,	27.
	PR 000	FF 00		82.7	1	29	"	23901
77.780	77.803	77.80	2	77.8	2	"	"	29.4
		23 N		75.8	2	"	,,	41.
				71.5	ln	"	"	65.
			THE STATE OF	66.9	ln 1 To	1.14	,,	92.
E0.01E	58.634	58.64	2	66.2	1 Ir	99	"	96.
58.615	50.034	90.04	2	57.4	1	"	,,,	24039·7
54.495	54.521	54.52	4	54.5b	6	"	,,	63.5
37.008	37.025	37.01	1	37.0	1	"	6.8	24165.2
35.448	35.445	35.45	13r	35·4b	6	"		73.4
30 110	00 110	00 10	101	33.9	i	"	"	83.
29.080	29.054	29.06	10r	29·0b	8	1.13	"	24211.8
25.063	25.068	25.05	1	25.0	1		"	35.3
20 000	20 000	- 30	1.11	22.7	i	"	"	49.
21.870	21.855	21.86	9r	21·7b	6	"	"	54.]
19.855	19.852	19.85	5	19.8	4	"	"	65.9
16.496	16.496	16.49	4	16.4	2	"	"	85.7
	34 34	1 1 2 2 3		13.6	In	"	"	24303
	07.665	07.65	4	07.5	2	"	"	38.0
4097.690	4097-692	4097.69	6	4097.7	6		6.9	97.1
	10-4			93.0	ln	1.12	,,	24425
	The state of the s		1 2 .	91.0	i	"	,,	37.
88.646	88.651	88.64	2			91	"	51.1
87.950	87.948	87.94	2	88.0	2	"	"	55.3
THE THE		156	Fight .	85.5	1	"	",	70.
. Total a	The state of the s	237	F-155	85.4	1	"	"	71.
84.442	84.450	84.45	2	84.5	1	,,,	"	76.2

RHODIUM—continued.

	Arc Spect	trum		Spark Spe	ectrum	Reduc	tion to	
The state of	Wave-length		Inten- sity	Wave- length	Inten- sity	Vac	uum	Oscillation
	Rowland	Exner	and		and		an Willes	Frequency in Vacuo
Kayser	and	and	Cha-	Exner and	Cha-	λ+	1_	111 1 11000
	Tatnall	Haschek	racter	Haschek	racter		λ	
4082.942	4082-949	4082.99	10	4083·0b	8	1.12	6.9	24485.1
81.961	81.975	81.98	2	82.0	1	,,	,,	91.1
80.690	80.699	80.70	1	80.9	1	,,	,,	98.8
77.739	77.748	77.74	4	77.8	2	,,	,,	24516.5
				61.0	1b	,,	,,	24618
WO 107	WO HOO		1000	59.5	lb	"	,,	27.
56.491	56.503	56.50	2	56.5	2	"	,,	44.9
53.602	53.603	53.60	2	53.7	2	1.11	"	62.5
49.188	49.200	49.17	2	49.2	2	"	7.0	89.3
48.572	48.571	48.56	3	48.6	2	"	"	93.1
				43.6	ln	,,,	"	24723
				43.0	ln	"	"	27.
				40.3	1b	27	"	44.
				34.0	1	,,	"	82.
26.089		00.00	100	28.6	1	"	"	24816
23.302	99.901	26.09	1	26.2	ln	,,	"	31.5
25.302	23.301	23.29	4	23.3	6	"	77	48.2
				20.3		,,	17	67.
				17.1	1	1.10	"	87.
				05.5	ln		77.7	24959
3996-313	2006.207	2006-21	0	03.3	ln	"	7.1	72.
95.768	3996·307 95·766	3996·31 95·77	6	3996·2 95·7	8	- "	"	25016·0 19·4
99 100	99.100	99-11	5	86.6	ln	"	"	77.
84.555	84.556	84.56	5	84·5b	6	"	"	89.8
76.240	04 000	04.00	0	76.3	1	"	"	25142.3
10 240				76.1	1	"	"	43.
75.472	75.465	75.48	5	75·3b	6	1.09	"	47.1
10 112	10 400	10 10		73.5	ln		"	60.
				69.3	ln	"	"	86.
68.320		68.33	2	000		"	"	92.4
64.688	64.688	64.68	3			"	"	25215.6
59.006	59.009	59.00	20r	59.0b	10b	"	"	57.8
58.313		58.31	4	58.3	4	,,	**	56.2
53.214		53.20	1			"	7.2	88.7
				50.6	1b	,,	,,	25305
		44.10	2			,,	,,	47.1
42.862	4-0-51	42.88	5	42.9b	6	,,	,,,	55.0
	42.059		8			,,	,,,	60.2
				40.6	1	"	,,	70.
				39.8	2	,,	"	75.
The same				38.7	1	,,	,,	82.
		38.05	1	38.0	1	,,	"	86.1
35.982	35.983	35.99	6	35.9b	4	1.08	"	99.4
35.123	35.120	35.11	4	35.1	2	,,	,,	25405.)
34.384	34.368	34.39	15r	34·3e	8	,,	,,	09.8
				29.5	ln	"	"	41.
				26.6	1	"	"	60.
MOTO IN				26.2	1	"	,,	63.
Part of the last				25.1	1	"	"	70:
00.010	00 000			24.7	1	"	"	72.
22.340	22:337	22.34	5	22.4	4	>>	>>	87.8
		16.55	1	17.0		,,	"	25525.7
ALL THE STREET	1 2 3 P. L. 19	The state of	1 Sept.	15.8	1	"	99	30.

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Rayser Rowland and Tathall Exner and Facter Haschek Facter Facter Haschek Facter Factor Fa	Toy or	Arc Spect			Spark Spe		Podnot	tion to	
Rowland and Tainall Exner and And Haschek Exner	7	Vave-length		Inten-		1			Oscillation
Rayser Rowland and Tathall Exner and Haschek Chae the racter Haschek Chae the racter Haschek Chae the racter Large				sity		sity			Frequency
3913-657 12-971 12-964 12-98 2 13-0 11-0 11-0 11-0 11-0 11-0 11-0 11-0	77				-	and		1	in Vacuo
3913-687 12-964 12-964 12-98 2 13-0 11-0 12-6 11-7 11-2 11-1 11-2 11-2 11-1 11-2 11-1 11-2 11-1 11-2 11-1 11-2 11-1 11-2 11-1 11-2 11-1 11-2 11-1 11-2 11-1 11-2 11-1 11-2 11-1 11-2 11-1 11-2 11-1 11-2 11-1 11-2 11-1 11-2	Kayser						A+	λ	
12-971	7.7.1100		FILE GALUE				1.08	7.2	
12-6							"	97	
05·423	12.971	12.964	12.98	2			"	"	
11-2	Edition						"	"	
10-6	1								
05·423	180000			1.20					
05·423							- 11/1/2	"	
05·423				1				7.3	
05·423				733				F2021 14 7	
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	44 10 10 10			-					
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$				1 1 1		ln			The second second
05·423 04·362 04·359 04·359 02·66 1 02·66 1 02·3 01·1 1 03·0 1 1 1 03·0 1 1 1 03·0 1 1 1 1 03·0 1 1 1 1 03·0 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1				1338		1			
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$				The same	05.5	1			98.
04·362 04·359 04·35 2 03·0 1 " " " 14·05·2 14·05·2 14·05·2 14·06·2 14·06·2 11	05.423		05.41	1	The state of the s			,,	
04·362							"	,,	
3891·953 3886·470 <td< td=""><td>THE LOW</td><td></td><td></td><td></td><td>04.5</td><td>2</td><td>"</td><td>"</td><td></td></td<>	THE LOW				04.5	2	"	"	
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	04.362	04.359	04.35	2			,,	"	
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$			00.00	PER	03.0	1	"	99	
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$		VI STATE OF	02.66	1	00.0		"	"	
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$		4.770.0		THE REAL PROPERTY.					
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$									
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$									
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$									
3898·13 2 98·6 1									
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$				1 933					
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$			3898-13	2			1000		
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$					97.8	1			48.
3891·953 3891·953 0 96·1 94·8 1n 93·8 1n 96·1 94·8 1n 93·8 1n 96·1 90·5 1 90·5 1 90·5 1 90·6 1 90·6 1 90·7 80·1 80·6 1 90·7 80·1	MENT-NE				97.3		,,		51.
3891·953 0 94·8 1n " " 68·75· 75· 10 96· 99·0 1n " 99·0 1n 99·0 1n 99·0 1n 99·0 1n 90·0 1n							1.07	,,	
3891·953 0 93·8 1n							,,	,,	
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	(b) Table 3.7						"	- "	
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$							"	"	
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$				0			1		4
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	•:					-			
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$									
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	88.475		88.48	2					
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	00 410		00 40						
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$		3886-470		3	0.0	1			
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$		0000 1,0			86.0	ln	1-77-57		
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	De la serie	THE RESERVE							
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$					83.2	1b			45.
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	The same of	West 3 03 0							
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	THE PERSON NAMED IN						1		
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	(- C - C -			1 84E			99	,,	
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	Sent Carl		The state of	1000),,	,,	
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	77.470	77.482	77.47	4			>>	"	
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$							"	"	
70·4b 2 ,, ,, 30·	F0 -0.1	MO 400	HO	9					
	72.534	72.532	72.57	3			1 -11		
70.140 70.151 70.16 5 70.2 6 , , , 31.5	70.140	70.151	70.16	5			1 1950		31.5

RHODIUM—continued.

	Arc Spect	rum		Spark Spe	ectrum	Reduc	tion to	
	Wave-length		Inten-	Wave-	Inten-	Vac	uum	Oscillation
	1 1	-	sity	length	sity	37.4		Frequency in Vacuo
17	Rowland	Exner	and Cha-	77	and Cha-	λ+	$\frac{1}{\lambda}$	III Vacuo
Kayser	and Tatnall	and Haschek	racter	Exner and Haschek	racter	**	λ	2点法
THE WATER		•	PARTY.	3869-2	1	1.07	7.3	25838
3865.291			1		School or	"	,,	63.9
				63.7	1	1.06	"	75.
56.663	3856.654	3856.62	20r	56.7b	10	1.06	29	25922.0
56.167	56.165	56.15	4	56.3	2	"	"	25.2
		54.81	3	54.8	2	"	"	34.3
			THE .	53·5 52·7	ln ln	"	"	43.
		49.14	2	49.2	2	"	"	72.5
		44.55	1	49.2	4	,,,	"	26003.5
		44.00	Barrier .	44.0	1b	"	"	07.
	25 4 - 100		THE REAL PROPERTY.	41.3	1	"	79	26.
	20,2012		PERM	40.6	i	"	"	30.
				40.3	î	"	"	32.
STILL TO			38	38.9	1b	"	"	42.
34.893	34.895	34.89	3	35.0	2	"	"	69.1
34.016	34.020	34.03	15r	34·1b	6	"	"	75.0
33.733		02.00	0	0115		"	"	76.9
00.00		29.17	1		-10/2	"	"	26108.0
28.623	28.615	28.61		28.7b	6	"	"	11.8
27.505	20 020		15r	2012		"	"	19.4
			0	24.8	1	"	"	38.
22.397	22.399	22.43	15r	22.5b	6	"	"	54.2
Section 1		18.90	1			"	"	78.2
18:345	18.339	18.34	4	18·4b	8	"	"	82.1
17.990	STATE OF		0	18.0	ln	"	7.4	84.4
17.524			0	A STATE OF S	1		,,	87.6
16.611	16.611	16.62	4	16.7b	6	1.05	"	93.8
15.169	15.166	15.18	3	15·2b	4	"	"	26203.7
12.599	12.603	12.61	3	12.7	1	"	"	21.4
00 000	00.010			11.9	1	"	"	26.
09.655	09.648	09.65	3	09.7	2	"	- >>	41.7
06.920	06.908	06.91	4	06.90	4	"	"	60.6
06.071	06.070	06.08	4	06·1b	4	"	"	66.4
3799.466	3799-461*	99.46	7r	3799.6	10	22	. ,,	26312.1
Harris F-		2014	· WORF	98.3	1	99	"	43.
93.366	93.364	93.40	4r	95·0 93·3b	8	"	"	54.4
33 300	99 904	92.33	4	92.4	4	"	"	61.6
	A Committee	34 00	*	91.6	1	"	"	67.
		90.58	1	310		"	"	73.8
		2000		89.8	1	"	"	79.
88.633	88.624	88.64	6	88·7b	6	"	"	87.4
N. G.V.		1 - 125	The state of the s	86.0	2	99	"	26406
				85.4	ln	"	"	10.
	NAME OF STREET			81.0	ln	39	"	41.
			100	80.0	ln	,,	"	48.
78.279	78-279	78.28	4	78·3b	4	"	"	59.7
				77.0	1	"	,,	69.
75.864		75.85	2	76.0	2	1.04	>>	76.6
P. P. Land	Well Day		THE PARTY	72.8	1	,,	7.5	98.
71.779		71.77	2	71.8	2	"	,,,	26505.2
70.130	70.125	70.13	5	70·1b	2	"	,,,	16.8

^{*} Distinct from Ru 3799.489.

RHODIUM—continued.

	Arc Spectr	um		Spark Spe	ectrum	1000		
	Tire opecu			орын орс		Reduct		
	Wave-length		Inten-	Wave-	Inten-	v a.cu	шш	Oscillation
			sity	length	sity			Frequency
	Rowland	Exner	and		and		1	in Vacuo
Kayser	and	and	Cha- racter	Exner and	Cha- racter	λ+	λ	
	Tatnall	Haschek	racter	Haschek	racter			
			7000	3768.8	1	1.04	7.5	26526
				67.2	1	,,	,,,	37.
3765-232	3765.227	3765-24	8r	65·2b	10	"	,,	51.3
				60.9	1	,,	,,	82.
60.554	60.559	60.55	2	60.6	2	33	,,	84.3
				59.6	1	"	,,	91.
~				57.3	ln	,,	,,	26607
55.748	55.736	55.73	2	55.7	2	,,	,,	18.4
55.290			1			"	,,	21.6
54.441	54.431	54.44	5			,,	,,	27.7
54.269	54.268	54.26	5	54·3b	6	"	"	28.8
	THE PARTY		FINE .	50.6	1	"	,,	55.
48.383	48.362	48.37	6	48.40	8	,,	,,,	70.8
				46.1	1	"	,,,	87.
				45.7	1	"	"	90.
44.325	44.325	44.32	4	44·2b	8	"	,,,	99.6
37.448	37.421	37.43	4		145	1.03	,,,	26700
		E LE STA	1	37·3b	6	,,,	,,	48.8
	36.295	36.00	4			. ,,	"	50.
35.429	35.429	35.44	6	35·4b	8	,,	"	58.0
						•••	,,	63.1
			1993	35.0	1	"	,,,	66.
		34.34	1		13.5	"	99	71.0
				33.4	ln	"	,,,	78.
				31.6	1	"	,,,	90.
05 001		07.10		26.8	1	"	7.6	26825
25.091		25.10	2	25.1	1	"	"	37.4
		20.03	2531	22.3	ln	99	"	58.
		20.91	1	15.0	THE STATE	"	,,	67.0
				17.2	1	"	,,,	94.
14 000	14.000	14.00		15.3	1	99	99	26908
14.989	14.975	14.99	4	15.0	$\frac{2}{1}$, ,,	,,,	10.
10.200	10.555	13.98	1	14.0		"	"	17.
13.593	13.575	13.60	3	13.6	4	"	"	20.
13.156	13·172 09·773	13.18	4r 2	13·1e	8	"	"	23.
	09.119		2	08.6	1	"	"	48· 57·
					1	,,,	"	
				07·1 05·2	1	"	"	68· 81·
				04.5	i	"	"	87
	1 10 10 10			02.7	ln	"	"	27000
01.057	01.056	01.07	20r	01.14		"	"	11
01 001	01 000	01.07	201	00.3	1	"	"	17
3699.461	3699.458	3699-46	2	3699·5h		,,	"	23
98.758	98.742	98.76	5	98.7	4	,,	"	28
98.415	98.410	98.40	3	98.4	4	"	"	31
00 410	30 410	96.24	1	30 4		1.02	"	46
95.674	95.669	95.65	5	95.71	6			51
95.105	95.099	95.10		95.1	2	"	"	55
00 100	30 033	30 10	12	94.3	1	"	"	61
92.506	92.502	92.51	25r	92.5	10	"	"	74
32 500	32 002	32 31	201	91.6	2	"	"	81
91.481	91.477	91.50	2	310	-	"	,,,	81
90.872		90.88		90.9p	8	"	"	86

RHODIUM-continued.

			ODIOM	-continuea				1
	Arc Spect	rum		Spark Spe	ctrum	Reduc	tion to	
, I	Vave-length	The Park	Inten- sity	Wave- length	Inten- sity	v ac	dani	Oscillation
Kayser	Rowland and Tatnall	Exner and Haschek	cha- racter	Exner and	and Cha- racter	λ +	$\frac{1}{\lambda}$	in Vacuo
	Taunan	Haschek	TACUCI	Haschek	Tactel			
20172			The same	3688.7	ln	1.02	7.6	27102
	3683.615		4	88.0	1	"	7.7	07· 39·6
	0000 010			83.3	1n	"	,,	42.
0001 005	83.030	0001 10	2			,,	"	43.9
3681.205	81.184	3681.19	6	81·2b 80·3	10	99	"	57·4 64·
	79.353		2	00.0	1	"	"	71.0
				79.0	1	,,,	,,	74.
	0.00			77.5	1b	"	,,,	85.
74.924	74.916	74.92	5	75·9 74·9	1 4	"	"	97· 27203·8
	73.710		2	110		"	"	12.7
			e in u	73.5	1n	,,	,,	14.
			920	70·7 69·2	1b	"	,,,	35· 46·
67.070	67.065	67.08	6	67.1	4	"	"	62.0
66.381	66.366	66.39	7	66.3p	8	"	"	67.2
CO.00#	69.010	60.00		64.9	1	"	"	78.
62.027 61.760	62·018 61·748	62·02 61·77	3 2	62·0b	4	"	23	99·6 27301·6
01 100	01 110	61.55	1			"	"	03.1
58.148	58.135	58.15	15r	58·2b	10	,,	"	28.6
55.044	56·994 55·026	55.04	8	55.0c	4	1.01	"	37.2
99.044	54.569	55.04	1	99.06	4	"	"	51·8 55·3
		53.64	î			"	,,	62.3
51.516	51.505	51.53	2	40.0	HALL WALL	,,	"	78.2
			ERVE I	49.8	l ln	"	,,	91.
		48.51	1	400	111	"	"	27400.7
44.363			0			,,	,,	31.9
43.301			0	43.8	1b	"	"	36.
49 901		42.83	0	42.8	1b	19	"	39·9 43·5
				42.2	ln	"	"	48.
20.004	90,000	00.00	0	41.3	2	"	,,,	55.
39.684	39.662	39.69	6	39·7 37·1	4	"	7.8	67·3 87·
			The state of	35.9	ln	"	,,,	96.
		Towns.	with.	33.8	1	,,	"	27512
		用质数	102	33.0	1	"	,,	18.
				32·3 30·5	1	. ,,	"	23· 37·
		1	100	29.7	1b	"	"	43.
27.958	27.957	27.95	4	28.0	2	"	"	55.9
27·342 26·759	27·334 26·744	27·30 26·75	4 7	27·3 26·7b	1 10	"	"	60.7
20 100	20 /11	20 10	1300	25.0	10	"	"	78.
	1 2 3	Ser E 18		24.5	1	"	"	82.
Service .	10. # JEE	17 N ST	To Take	23.2	1	"	"	92.
			13.00	23.0	1	"	"	27600
20.621	20.605	20.61	5	20.6	4	"	"	11.8

RHODIUM—continued.

		Reduct	etrum	Spark Spe	A SHE	rum	Arc Spect	
Oscillation	ium	Vacu	Inten- sity	Wave- length	Inten-		Wave-length	
Frequency in Vacuo	1	λ+	and Cha-	Exner and	and Cha-	Exner	Rowland and	Kayser
	λ		racter	Haschek	racter	Haschek	Tatnall	Rayser
27623	7.8	1.01	1	3619-1				
42.	" "	1.00	ln	16.6			TOWN THE	
53· 55·2	,,	>7	1	15·2b	4	3614.93	3614.931	3614.934
56.	39	"	8	14.8	*	2017 20	2014 221	0014 004
57.2	"	"	TO THE		1	14.67	THE BOOK	14:674
61.6	"	,,,			1	Charles II		14.099
63.	"	19	ln	13.9				
72.9	99	, ,,	0	10.5	6r	12.62	12.618	12.621
74· 85·9	"	99	8	12.5	1n	10.93	are in	
27701	"	"	1n	09.0	111	10.93		AND HELD
05.	"	"	1	08.5				
06.5	"	"	2	08.2	4	08.25	08.243	08.246
09.	"	"	1	07.9				-
23.5	,,	"			6	06.05	06.019	06.029
25.	,,	99	6	05·8c				
47· 53·1	22	"	1n	03.0	2		00.100	
63.0	"	"	Value III	DELFA!	4	00.90	02.182	00.911
65.	"	"	ln	00.6	*	00 90		00 311
85.0	"	"	2	3598.0	4	3598.05	3598.051	3598.057
90.8	"	"	8	97·3b	12r	97.31	97.294	97.300
98.3	,,	,,	10	96·3b	4r	96.32		96.343
99.4	,,	"			4		96.185	96.183
27805	"	"	1b	95.5				
10.	7.9	"	1	94.8	0	94.07	THE SHE	94.054
18.7	"	"	2	93.7	3	93.70		93.685
24.	"	"	ī	93.0		20.10		00 000
42.0	,,	"	2	90.6	1	90.65	90.678	90.688
80.	"	"	2	85.8			IN THE REAL PROPERTY.	
86.	"	99	1	85.0		C. C. C.	manusch 1	
96.4	,,	"	4	83.6p	4	83.67	83.683	
99·8 27901·	99 .	,,	6	09.1	20r	83.24	83.252	
19.	99	"	1	83·1 80·8	WE TO			
21.9	"	"	i	80.5	.1	80.41		
27.	"	"	În	79.7	and.	E L		
36.	,,	,,	1	78.6				
48.	,,	0.99	1	77.0			1.75 JEST	
52.	,,	,,	1	76.6			312 (27)	
55· 59·	,,	"	1	76·2" 75·7	ELIT		1	
61.	"	"	1	75.4	1414			
72.	"	"	1	74.0			The Chief	
77.	"	"	1	73.4				
84.	"	,,	1	72.5	399		CHARLES !	
87.	,,	,,	1	72.1	1		AND STATE	
89.	,,	99	1	71.8	300		163 6 705	
95· 28000·7	,,	"	2 8	71.0	10		70.333	
10.	"	"	8	70·3 69·2	10		10.333	11 - 7 7 3
12.	"	"	1	68.9	TARRES .			

RHODIUM—continued.

Oscillation Frequence in Vacue		Reduct	ctrum	Spark Spe		rum	Arc Spect	
	ium	Vacu	Intensity	Wave- length	Intensity		Vave-length	,
	$\frac{1}{\lambda}$	λ+	and Cha- racter	Exner and Haschek	and Cha- racter	Exner and Haschek	Rowland and Tatnall	Kayser
28014	7.9	0.99	1	3568.6				
17.	,,	,,	1	68.3				
26.	,,	,,	ln	67.1				
32.	,,	,,	1	66.3				
48.	,,	99	2	64.2	3	3564.31	3564.282	3564.290
58.	,,	"	2	62.2				
65.	,,	"	ln	63.0				
68.	,,,	"	ln •	61.8		00.70		
80.	"	"	1	60.3	1	60.53		
81.	"	"	i	60.1				
88.	"	"	î	59.2				
90.	"	"	i	59.0	9,007			200
93.	"	"	î	58.6	Time.			
98.	,,	"	î	58.0"				- 10
28102	,,	,,	1	57.5				
04.	,,	,,	1	57.2				RILLER
07.	,,	,,	1n	56.8		1		
30.	,,	,,	1	53.9		E		
33.	,,	,,	1	53.6				
37.	,,	,,	1	53.1				
39.	"	99	1	52.8				
47.	8.0	,,,	1	51.8				
58· 59·	,,	99	1b	50.4		50.35	20.742	FO 3.05
61.	"	"	1	50.0	1	50.15	50.145	50.165
63.	"	,,,	10	49·6c	5	49.70	49.689	49.681
28207	"	"	10	49.00	5	44.13	44.097	44.122
09.	"	"	8	43.9	0	44.19	44.097	44 122
24.	"	"	0	100	4	42.05	42.065	42.068
25.	"	"	4	41.9		12 00	12 000	12 000
53.	,,	"			4	38.41	38.391	38.409
54.	,,	,,	8	38·2b	3	38.27	38.293	38-269
62.	,,	0.98	1	37.3				
68.	,,	,,	1	36.6				
69.	,,	"	1	36.4				
86.	,,	,,	ln	34.3	100			
28302	,,,	,,	1	32.3		1 350	20 70	
16· 35·	,,	"	1	30.6	2	90.10	30.536	00.100
35· 54·	39	"	10	28·1b	15r	28.18	28.177	28.183
55.	"	"	6	95.7	2	25.80	25.808	25.805
81.	33	"	2	25·7 22·5		* /		Y
94.	23	"	1	20.9				1
28403	"	"	2	19.6	2	19.67	19.692	19.690
20.	"	"	ī	17.7	1840	20 01	20 002	20 00.9
23.	"	"	î	17.3		S. S. E. S.		AS H TO SE
27.	,,	,,	1	16.8	THE ST			A VALLE
43.	,,	"	1	14.8	0000			Application of
52.	,,	.,	4	13.7	EX. TEL	Control of the last	The state of	State of
55.	99	"	4	13.2	4	13.25	13.258	13.258
66.	"	,,	2	11.9	4	11.94	11.940	11.942
68.	8.1	,,	2	11.6	3	11.69	11.691	11.696

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RHODIUM—continued.

	Arc Spect	rum	Y S ST	Spark Spe	ectrum	Reduc		
1	Wave-length		Inten-	Wave-	Inten-	Vacı	ium	Oscillatio
			sity	length	sity			
DE TOTAL	Rowland	Exner	and	-	and			Frequence in Vacue
Kayser	and	and	Cha-	Exner and	Cha-	λ+	1-	111111111111111111111111111111111111111
2200	Tatnall	Haschek	racter	Haschek	racter		$\frac{1}{\lambda}$ -	
3509.444			3			0.98	8.1	28486-4
08.754		3508.65	1					92.5
07.471	3507.466	07.48	8r	3507·4b	8	"	"	28502.5
05.559	05.558	05.55	4	05.5	2	"	"	18.0
02.686	02.674	02.67	15r	02.6a	10	"	"	41.5
02.000	02.014					"	,,,	
-		00.70	1	00.7	1	27	"	57.6
0 400 000	0.400.000	000000		3499.3	1	- ,,	,,	69.
3498.887	3498.878	3498.88	15	98.8p	8	0.97	,,	72.4
			1	96.6	1	,,	"	91.
				96.0	1	,,	,,	96.
94.585	94.591	94.58	5	94.5	2	,,	,,	28607
91.365	91.353	91.35	3			,,	,,	34.
91.216	91.218	91.21	3	91.2"	2		"	35.5
	01 210	01.21		90.6	ĩ	,,,		40.
				90.3	î	"	"	43.
		89.81	1	90 0	1	"	"	46.
07.601	07.000					99	>>	
87.621	87.609	87.61	3			"	,,,	64.
02 000			A DOME	87.5	1	"	"	66.
87.366	87.363	87.36	3	1 7 34 4		,,	,,	66.
				87.2	1	,,	,,	68.
85.031			2			,,	,,	86.
84.186	84.184	84.19	4			,,	,,,	93.
				84.0	4		"	95.
		83.20	0	1		"	"	28701
		81.33	2			22	District Co.	16.
80.658		01 00	ő			"	"	22.
79.064	79.053	70.07	10r	79·0b	2	"	"	35.
		79.07		19.00	Z	"	,,,	
78.646	78.640	78.65	2			,,	"	38.
		77.96	1	77.9b	8	,,	"	44.
77.354			1			,,	,,	49.
74.939	74.920	74.95	10r	74.9a	8	,,	,,	69.
		73.93	1			,,	,,,	77-
				73.8	1	,,	"	79.
72.994			0	124 37 4		,,	"	85.
72.402	72.393	72.40	5	72.3	4			90.
12 102	. 2 000	71.46	2	.20	1	"	"	98.
70.817	70.805	70.82	10r			"	8.2	28803
10.011	10.909	10.82	TOF	70.61	8	"		20005
70.77			1 4	70.6b	8	"	"	
70.515	00	00.00	1			99	"	06.
69.774	69.770	69.80	6	69.7	5 Ni	,,	,,	12.
69.355			0	LOEDS		99	,,	15.
881 . B			1 7/13	64.9	1	,,	,,	53.
62.191	62.184	62.19	12r	62·2a	8	"	,,	75
59.375	THE PARTY NAMED IN	59.36	3	59.3	1	11	,,	98
58.815	-	VI C. A.	0		170 11	0.96	,,	28903
58.070	58.072	58.07	3	58.1	4			09
57.219	57.216	57.21	5	57.2	4	"	"	16
	01.210	31.21	0	312	4	"	"	24
56.284	EF. PH.			PP.E	13,30	""	"	30
55.595	55.571	55.57	4	55.5	1	,,	,,,	
55.369	55.365	55.36	4	55.4	4	,,	, ,,	32
54.617	A PERSON	Pales 19, 10	0	1	A SHIELD	,,	- "	38.
	1		FIRE STATES	52.7	2	,,	19	55.
51.294	51.298	51.30	4			1,		66.

RHODIUM—continued.

	Arc Spects	rum		Spark Spe	ectrum	Reduc	tion to	
V	Vave-length		Inten-	Wave-	Inten-	Vacı	ıum	Oscillation
		1	sity	length	sity			Frequency
	Rowland	Exner	and		and	100		in Vacuo
Kayser	and-	and	Cha-	Exner and	Cha-	λ+	1_	111 1 10000
itaysei	Tatnall	Haschek	racter	Haschek	racter		λ	
3450.437	3450.435	3450.47	5	3450.4	1	0.96	8.2	28973.5
48.715	48.723	48.72	5	48.7	2			88.1
47.897	47.883	47.89	6	47.8	2	"	"	95.0
11 001	11 000	#1 00	0	46.7	ĩ	"	"	29005
46.202			0	10.		,,	"	09.2
10 202				45.4	1.	"	"	16.
	3 . AL			43.1	i	"	"	35.
43.001			2	101		"	"	36.2
10 001		42.87	ī			,,		37.3
42.781	42.775	42.79	4	42.8	2	"	"	38.0
42.243	12 110	12 10	ō	120		"	"	42.6
40.675	40.671	40.69	4	40.66	6		"	55.8
35.037	35.039	35.03	15r	35.0b	10	"	,,	29103.6
30 001	00 000	00 00	101	33.7	1 Ni	"	"	15.
32.234	32.238	32.24	2	32.3	1	"	8.3	27.2
02 201	02 200	02 21		31.0	î	"		38.
28.559	25	28.52	2	010	Sall Sale	"	"	58.6
20000	Party Mary	2002		28.2	1n	"	. "	62.
24.533	24.532	24.49	6	24.5	4	"	"	92.9
23.699	21002	2110	0	210			"	99.9
22.430	22.434	22.43	3	22.4	1	"	"	29210.7
200	101	22 10		21.3	8	"		20.
20.307	20.312	20.32	4	20.3	2		"	28.8
2000	20012	2002		18.1	1	"	"	48.
16.901			0	101		0.95	"	58.0
15.824		100,000	0				"	67.2
10 021				15.2	2	- "	"	73.
12.425	12.417	12.43	6	12·4b	8	"	"	96.4
10.625		12 10	i	1210		"	"	29311.8
10.074			0			"	"	16.6
08.990			0	09.0	1	"	99	25.9
07.884	07.883	07.87	2	08.0	î	"	"	35.5
07.387	0.000	07.38	2	07.4	1 Ni		1	39.7
06.690	06.694	06.70	5	06.7	4	"	"	45.7
04.021	0.5 00 1	04.03	2n	04.0	În	"	"	68.7
03.247		0100	0	3.0			1	75.4
Lake F	4			02.2	1	22	"	84.
01.109		01.11	3	01.2	î	,,	"	93.9
100		01 11	,	00.3	î	"	"	29401
3399.823	3399-839	3399.82	7	3399·9b	4	"	"	05.0
96.956	96.960	96.95	15r	97·0b	10	99	"	29.8
00 000	00 000	00 35	101	95.6	2	"	8.4	41.
95.014	95.040	95.01	3	300	The state of	"		46.5
0.1	05 010	00 01		92.8	1	"	"	66.
92.230	The state of the s	92.24	1	320	1533	"	"	70.7
91.935	91.927	91.92	2	92.0	1	"	"	72.7
91.847	01 021	91.85	2	320		"	"	73.4
90.608	The second	31 00	ln	E. W. O.	- T	, ,,	"	84.8
00 000	10 10 10	100000	111	89.5"	1	99	"	94.
89.340	89.361	89.34	3	000		"	, ,,	95.8
87.960	00 001	0004	0	M. Commercial		"	"	29507.9
5, 555	16 1	THE PARTY OF THE		87.3	1	. ,,	"	14.
87.174	10 10	87.16	2	MEM	The said	"	"	14.8
	127	31 10	-	86.3	1	"	99	22.

RHODIUM—continued.

		101	TODIUM	-continue	<i>u</i> .			
	Arc Spect	rum	Beer !	Spark Sp	ectrum		tion to	
	Wave-length		Inten- sity	Wave- length	Inten- sity	Vac	dum	Oscillation Frequency
Kayser	Rowland and Tatnall	Exner and Haschek	and Cha- racter	Exner and Haschek	and Cha- racter	λ+	$\frac{1}{\lambda}$	in Vacuo
3385-919	3385.924	3385.92	6	3386.0	4	0.95	8.4	29525.7
	The latest			82.6	1 2	"	"	55.
81.578	81.589	81.60	4	81.7	Z	>>	"	63· 63·5
81.208	01 000	01 00	ō	TO THE SE		"	"	66.8
			193	81.0	1	"	,,	69.
80.775	WELL THE S	80.80	4			"	,,	70.6
77.050	77.050	77.01	4	78.7	$\frac{1}{2}$	0.94	99	89.
77·850 77·742	77.856	77.81	2	77.8	Z		"	96·3 97·2
77.275	77.282	77.28	5	77.2	4	"	"	29601.2
				76.5	1	,,	"	08.
76.017			0			,,	"	12.3
75.735			On			,,	,,	14.8
73·879 72·930			0			"	"	31.1
72.672	72.668	72.68	2			"	"	41.7
72.379	.12 000	12 00	7	72·4c	2	"	"	44.2
		300		71.6	1	,,	"	51.
		3 2		71.3	1	,,	,,	54.
Marie Str.	THE STATE OF			70.9	1	"	,,	57.
				70·6 70·2	1 1	"	,,	60.
69.824		69.82	5	69.8	2	"	"	66.7
68.914	68-918	. 68.91	3			,,	"	74.8
A E				68.8	1	99	"	76.
68.518		68.52	6	68.5	6	,,	"	78.2
65.650			0	66.9	ln	"	"	93· 29703·5
65.138			0	65.1	1	99	"	08.1
64.281			Ö	64.3	î	"	"	15.6
				63.7	1	"	,,	21.
63.382	RE P. LOS		0	20.4		,,	,,	23.6
62.321	62.330	62.33	5	62.4	2	,,,	"	32.9
60·952 60·043	60·947 60·038	60·95 60·04	8	61.0	6 4	"	8.5	45·0 53·0
58.962	00 000	00 04	0	000		"	"	62.6
57.980		58.00	2	E-E-E	Maria	,,	,,	71.4
57.560	THE PERSON NAMED IN		0	- William	To the	,,	99	75.0
56.670	THE WAR		1	56.7	1	,,	"	82.9
				56·3 56·0	2	"	"	86.
10:3-2				55.5	1	"	"	93.
54.853		54.85	4			"	"	99.1
	10		B- 1	54.7	1	,,	"	29800
	AL THE		1	54.5	1	,,	,,	02.
59.004	West State	59.04	2	54.1	1	"	"	06.
53.834	A THE REAL PROPERTY.	53.84	4	53.7	1	"	"	08.1
NE CO			The state of	53.6	i	"	"	10.
THE PARTY OF	Fared			53.2	1	"	"	14.
MARCH ST	The state of			52.8	1	,,	,,	17.
52.510	7.	52.52	2	ro.9	TO DE L	,,	,,	19.9
The same of	10 11	- C- 9-1	CINC .	52.3	1	99	99	22.

RHODIUM—continued.

	Arc Spect	rum	5 5 125	Spark Spe	ectrum	Reduct		
7	Wave-length		Inten-	Wave-	Inten-	Vacı	uum	Oscillation
UR HOLL			sity	length	sity	1		Frequenc in Vacuo
77	Rowland	Exner	and Cha-	7	and	1	1	In vacuo
Kayser	and Tatnall	and Haschek	racter	Exner and Haschek	Cha- racter	λ+	λ	
		411		3352.0	1	0.94	8.5	29824
and a			11.1138	51.6	1	,,	,,	28.
				51.2	1	22	"	31.5
	200	9 1 / 2	40000	51.1	1	,,	"	32.5
				50.7	1	>9	"	36.
1			-	50.5	1	99	,,	38.
			100	50.1	1	"	19	41.
				49.8	1	,,	"	44.
			1000	49.6	1	"	,,	46.
				49.1	1	"	,,,	50.
SVIII TO THE				49.0	1	"	,,	51.
			1000	48.4	1	* **	"	57.
	The second			48.1	1	"	"	59.
3347-660				47.8	1	"	99	62.
47.437	Statis and		0	477.1		"	"	63.3
41.431	1 1 1		1	47.1	1	99	"	70.
				46·9 46·7	1	"	"	72.
	BOTH H			46.2	In	99	"	76.
	3346.071		1	46.1	lin 1	>>	"	77:
	45.707		4	40.1	1	"	11	80.
	45.156		10			99	"	85.
	10 100		10	44.5	2	"	"	91.
44.337	44.340	3344.34	5	44.0	-	"	"	92.
43.573	22020	43.55	2	PART		"	"	99.
100,0		10 00	Cont.	43.2	2	"	"	29903
43.036	43.039	43.05	5	102		"	**	04.
			LOTP-	42.6	1	99	,,	08.
				42.0	1	,, .	17	14.
			The Mark	41.2	1	"	,,	21.
40.987			0		2.3	,,	,,	22.
		1 85 5 5	L. The	40.8	ln	,,,	,,	24.
38.672	38.687	38.69	7	38.7	4	0.93	,,,	43.
36.842		36.85	0	36.9	4	,,	,,	59.
35.328			0		1003	,,,	,,	73.
32.648	01.00	32.66	1		1835	"	19	97.
31.393	31.381	31.42	4	31.4	2	,,	**	30008
31.233	31.230	31.26	4	000	1.5.8	,,	19	10.
09.000	92,000	00.01	0	26.0	1	"	32	58.
23.232	23.228	23.24	6r	23·3b		"	8.6	82.
			183	20.0	1	"	,,,	30112
16.670			0	18.5	1	"	,,	42
14.665		14.67	0 2	14.7	ln	"	"	60
14 000		14.01	4	13.2	ln ln	"	"	74
	ERELL	1 500	100	10.7	ln	"	"	96
09.663		09.67	2	09.7	ln	"	"	30205
00 000		09 01	-	08.2	1	"	22,	19
08.067		08.06	3	002		"	,,,	20
07.474		07.47		07.50	4	"	"	26
07.091		07.10		0.00		,,,	"	29
		0, 10	1	05.5	1	"	"	44
05.298	- FE - E / E	05.30	4	05.3	i	"	"	45
04.258	The state of	04.25		04.2	lî	"	,,,	55.

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	Arc Spect	rum		Spark Spe	ectrum		tion to	
	Wave-length		Inten- sity	Wave- length	Intensity	Vac	uum	Oscillation Frequency
	Rowland	Exner	and		and			in Vacuo
Kayser	and	and	Cha-	Exner and	Cha-	λ+	1	
Itaysor	Tatnall	Haschek	racter	Haschek	racter		λ	
3303.872	The same		0			0.93	8.6	30258-9
03.474	3000	3303.49	0			,,	,,	62.5
	3303.068					"	,,,	66.3
	02.712	THE BOOK	4	3302.7	1	39	,,,	69.5
01.820		02.49	5			,,	,,,	71.6
		01.80	0		M E. FAN	99	,,,	77.8
. 5			1703	01.5	1	- >>	"	81.
		01.40	HA			39	,,	81.6
00.604	00.593	00.56	4	00.5	1	"	,,	89.0
00.479	to a case		4			"	,,	90.0
00.133		000000	0			0.92	"	93.2
3299.066		3299.06	2			0.92	"	30303.0
				3298.5	1	,,,	"	08.
00 000				98.3	1	"	>>	10.
97.667		07 47	0		- 1	,,	"	15.9
97.409	0000040	97.41	2	97.5	1	"	"	18.2
96.847	3296.842	96.86	4	96.8	2	"	"	23.4
04.049	III III III			95.7	1	"	"	34.
94.843	04.404	04.40	0	04.5		"19	"	41.9
94.400	94.404	94.42	5	94.5	4	39	99	45.9
93.533				93.8	1	99	"	51.
93.012			0			99	"	58.7
93.012			0	00.0	1.	"	"	
92.531			0	92.9	In	"	"	60.
92.991			U	92.3	ln	"	"	65.
				91.6	1	"	,,	72.
				89.9	2	"	99	87.
89.739	89.750	89.73	5	000	-	"	"	88.9
00 100	00 100	00.10		89.4	4	"	"	92.
89.274	89.266	89.26	5	00 1		"	"	93.3
88.159	00 200	88.16	2			"	8.7	30403.4
0.0 200		00 10		86.7	1	"	,,	17.
86.520		86.54	4	The state of the	13-37-5	"	"	18.5
85.964		85.99	2			"	,,	23.6
84.151			0			"	"	40.6
83.705	83.695	83.71	4r	83.7b	6	27	"	44.7
82.932	No. of Parts		0		Alle I	"	"	52.0
14.	82.455	date	5	82.0	4	"	"	56.3
81.827	81.822	81.83	4	THE PARTY.	1	"	"	62.1
322102				80·8a	8	"	"	72.
80.680	80.664	80.68	2r	d san		,,	,,	72.8
78.620		78.60	2	1000		"	"	92.0
12 20		I May		77.0"	1	99	"	30507
76.122		76.11	4	The state of		"	,,	15.2
H. 000		-10-	T-ty E	75.1	1	,,	,,	25.
74.908		74.90	4			"	,,,	26.5
VQ LINE		-0.4-	THEFT	74.3	2	"	"	32.
FUEL STE	E PASSE	73.47	1	50.0	D LE	,,	,,	39.9
YAY .			4593	73.2	1	"	"	42.
71.740	71.700	P1 P2	0	71.9	4	"	"	54.
71.748	71.736	71.75	8	70 71	1	"	"	56.0
70.702	BANKE	70.72	3	70·7b	1	99	"	65·7 73·
P.C.G.	The state of the state of	1 1 20	TO SECTION AND ADDRESS.	69.9	1	99	99	10.

RHODIUM—continued.

	Arc Spect	rum		Spark Spe	ectrum	Reduction to		
	Wave-length	915	Inten-	Wave-	Inten-	Vacu	ıum	Oscillation
	8		sity	length	sity			Frequenc in Vacuo
	Rowland	Exner	and		and		1	in Vacuo
Kayser	and	and	Cha-	Exner and	Cha-	λ+	1	
1kay set	Tatnall	Haschek	racter	Haschek	racter		λ	
				3268.7	2	0.92	8.7	30584
3268.597		3268-62	5	0200 .	U TOO	,,,	,,	85.4
0200 001		0200 02		67.7	6	,,	"	94.
67.605		67.62	1		9 9-00	33	,,	94.7
			1	66.7b	1	,,	,,	30603
66.511			1			"	19	05.0
				65.5	2	,,	"	14.
NAME OF THE PARTY		36 163		64.6	2	,,	,,	23.
64.313		3	0			,,	,,	25.6
63.924		63.95	2			33	,,	29.1
				63·4b	6	22	,,	34.
63.280	3263.268	63.30	8		10000	"	,,	35.3
1145				62.3	1	"	,,	45.
	61.175		2	61.2	1b	"	,,	55.1
60.938		60.97	2n				,,	57.2
59.994			0			0.91	,,	66.2
58.352			0	2000		,,,	,,	81.7
				57.2	ln	"	33	93.
				56.6	ln	,,	,,	98.
				55.3	1	"	,,	30710
55.104		55.10	4		172	,,	,,	12.3
				54.8	1	"	"	15.
- Block 1			12	54.2	1	"	"	21.
LANGE TO STATE OF THE PARTY OF				53.7	ln	"	,,	26.
53.457		53.47	2			,,	,,	27.8
				51.2	ln	"	8.8	49.
				50.4	ln	"	22	57.
50.151		50.16	2			"	,,	58.9
The state of			LI TUE	49.6	ln	,,,	,,	64.
		49.30	1			,,	,,,	67.1
			Karasa .	47.2	1	"	,,	87.
			1	45.1	1b	"	,,	30807
			1300	44.0	1	,,	,,	17.
	Salah Car		1	43.5	1	,,	,,	22.
42.820		42.81	1		Bitol	,,	,,,	28.0
42.111	CHE HALL	8-5/10	0	THE PARTY	PER	,,	,,	35.3
		FRANK	Day of A	41.8	1	,,	,,,	38.
41.602		14	0		75	,,	,,	40.1
40.998			0		-5.3	,,	• ,,	45.9
		A STATE OF	1.99	40.7	2	,,	,,,	49.
40.644			0	- 12-47	Bother -	99	"	49:
	THE WIFE		NOTE:	39.3	2	,,,	,,	62.
			Ballo V.	38.6	ln	,,	,,	69.
The lates			11790	37.9	2	99	,,	75.
37.781	37.777	37.80	4		DOM:	"	,,	76.5
			1 95	37.5	ln	,,	,,	79.
			1	36.3	1	99	,,,	91.
			J-Wa	36.0	1	,,	,,	94.
35.910		35.92	2	A STATE OF THE STA		"	,,	94:
34.656			0	THE STREET	1	99	,,	30906.4
			1- 3-	34.3	1	,,	99	10.
33.440		33.45	0	33.6	4	,,	,,,	18.0
32.627		32.65	4	32.7	1	,,	99	25.7
		1	1 = 12 = 3	32.3	1	99	39	29.

RHODIUM-continued.

	Arc Spect	rum		Spark Spe	ctrum	Reduc		100
V	Vave-length	P. P.	Inten-	Wave-	Inten-	Vacı	ıum	Oscillation
A CONTRACTOR OF THE PARTY OF TH	D 1 1 1	-	sity	length	sity			Frequency in Vacuo
Kayser	Rowland and	Exner	and Cha-	7	and Cha-	λ+	1_	in vacuo
nayser	Tatnall	Haschek	racter	Exner and Haschek	racter	X+	λ-	
				3231.3	4	0.91	8.8	30938
	7000 EU 15			29.5	1	,,	,,	56.
				29.0	1	,,	,,,	61.
Constant.		THE PLANT	The last	25.4	1	,,	,,	95.
2201.700		THE PERSON		24.7	2	"	,,	31002
3221·589 21·422	Story Barries		0	21.5	1	"	"	31.8
21.193			1	P. Shares		"	,,	33.4
21 193		The last of the	0	01.0	0	"	,,	35.6
20.893			2	21.0	2	"	"	37.
18.655			0		2 35	0.90	"	38.5
10 000			.0	18.5	2		"	62.
DATE OF THE PARTY		3218.40	3	100	-	,,	"	62.5
18.009		18.00	4	18.1	2	"	"	66.3
		2000	-	17.5	ī	"	,.	71.
The state of				17.0	i	,,	"	76.
The state of			1	16.5	ln	,,	,,	81.
The state of the s				15.1	1	,,	8.9	94.
14.984	STATE OF THE STATE	15.00	4			,,	,,	95.4
14.628			0	14.6	1	,,	,,	98.9
14.440	3214.440	14.44	4	Design in	1 18 5	,,	,,	31100.7
				13.8	1	"	99	07.
12.667	THE REAL PROPERTY.	12-8	1	13.1	2	,,	,,	14.
12.001		w Same	0			99	,,	17.9
11.504		11.50		11.7	1	"	, ,,	27.
11 504		11.52	3	10.7	1	39	"	29.1
			1	10.7	ln ln	"	"	37.
07.390		07.41	2	07.4	6	"	,,	69.0
06.202		06.21	4	06.3	1	"	,,	80.6
	THE THE	00 21	-	05.3	ln	"	"	89.
		Lax E	11000	02.0	1	"	,,	31222
			1 22	01.7	ln	"	"	25.
3199.979		3199.99	1			,,	,,,	41.2
97.257	3197.248	97.26	4	3197.2	4	,,	,,	67.9
94.671	94.660	94.69	4	94.6	1	,,	,,	93.2
93.963	Charles William	93.96	2	94.0	1	,,	,,	31300-2
93.633	- ST 10	R VIVER	1		1 1 1 1	,,	,,	03.4
92.336	STATE OF THE PARTY		0		131318	,,	,,	16.1
92.112	01.00=	01.00	0	The Maria		,,	,,	18:3
91.313	91.305	91.33	6			,,	,,	26.1
90.466	SALED TO SALE	00.40		91·2b	4	,,	"	27.
20 400		90.49	3	90.5	1	,,	,,	34.4
89.162	89.164	89.16	5	90.1	1 2	"		38· 47·3
00 102	00 104	89.10	9	89·2 88·7	4	,,	,,	52.
88.408		88.41	1	00.1	4	"	"	54.7
87.998	A PARTY	88.00	1	88·0b	6	,,	,,	58.
87.740	27 2 7 5 Y =	30 00	0	30 00	0	"	"	61.3
87.265	Comment of	THE WALL	0		130/15	"	"	66.0
85.702	85.710	85.72	5	85.6	2	"	,,	81:3
	The state of the s	THE WORLD	Ween!	84.7	ln	,,	,,	82.
84.485		TO SEE BY	0	The men of	1	,,	,,	91.
83.558	1 2 1/2	1 0 55 10	0	The same		,,	,,	31402.5

RHODIUM—continued.

		Arc Spect	rum		Spark Spe	ectrum		tion to	
	1	Wave-length		Inten-	Wave-	Inten-	Vac	uum	Oscillation
	Name of the last			sity	length	sity			Frequency
	(DE-2) (DE-	Rowland	Exner	and		and		1	in Vacuo
	Kayser	and	and	Cha-	Exner and	Cha-	λ+	$\frac{1}{\lambda}$	WALLED IN
7		Tatnall	Haschek	racter	Haschek	racter			
	3183-012	exell exelect		0	TO CHELD	10 mg	0.90	8.9	31407.9
	82.519			0			0.89	,,	12.8
-	81.330		3181.38	3	3181.3	1	,,	**	24.2
					80.5	1	,,	9.0	33.
	79.833	3179.843	79.84	5	80.0	2	,,	,,,	39.2
	78.517		78.51	4	78.6	1	,,	"	52.2
			P ST IN		77·7 77·3	1	,,,	"	60.
1	77-201	A methodal	77.20	4	11.9	The second	"	"	65.2
	77.020		1120	Ô			"	"	67.0
Ħ	76.666			0			"	"	70.6
1					76.3	1	,,	,,	74.
					74.6	4	***	,,	91.
1	38/35.00		to red .		73.7	2	,,	,,	31500
i	72.392		72.40	4	72.4	1	99	,,	12.9
	71.625 70.379		71.65	2 0	71.5	ln	"	,,	20.4
-	10.219			U	69.0	1	,,	"	33·0 47·
-	67.072		67.07	0	67.1	2	"	"	66.5
	0.0.2		0.0.		66.4	1	"	"	73.
					64.3	2	"	"	94.
	63.551		63.55	1			"	"	31001-1
1			62.84	0	TE STATE		>>	,,,	08.1
1	62.608			0	00.5		,,	,,	10.5
1	62.388		60.40	1	62.5	2	,,	"	12.
1	59.354		62·40 59·35	2	59·3b	8	"	"	12·6 43·1
	59.001		22.20	2	33 30		"	"	56.5
	58.063		58.06	2	58.0	ln i	"	"	56.0
		55.890	55.90		55.8	2	.,	.,	77.7
	55.489			6				,,	81.8
	54.453			0			••	,,	92.2
	FO 704	50.510	~0 M0		53.7	2	**	,.	31700
	52.724	52.719	52.73	6	52.6	2	,•	"	09.6
			51.50	4	51.5	2	,.	"	21 9
			01 00	-	50.7	ī	"	"	30.
ı	50.385		50.40	4	50.3	1	19	,,	33.1
1	49.978			0	49.9	2	,,	"	37.2
ı	48.350			1			,,	99	53.7
	45.500		40.04		48.0"	ln	"	"	57.
ı	47·736 47·274	E	47.74	0	47.2	ln	"	99	59·8 64·5
	46.327			0	41.2	111	,,	9.1	74.0
	45.734		45.71	2n	45.7	1	"	,,	80.1
	45.518			1		Can 191	,,	"	82.2
1	41.314			0	41·3b	4	0.88	"	31824.7
	40.963			0		MARCH I	,,	. 22	28.3
	40.549	New Art Land		1	40.4		"	99	32.5
-	40.355	SE TOWN		0	40.4	1	"	"	34.4
1	40,399			U	38.7	ln	"	**	51.
	38.506		38.50	1	001		"	91	53.2
				ATP THE		1	14 140		12

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RHODIUM-continued.

		Reduct	ctrum	Spark Spe		rum	Arc Spect	
Oscillati	ium	Vacu	Inten-	Wave-	Inten-		Wave-length	7
Frequenc	DOTE:		sity	length	sity	The Year In		
in Vacuo	1		and		and	Exner	Rowland	
PATTER N	λ	λ+	Cha-	Exner and	Cha-	and	and	Kayser
			racter	Haschek	racter	Haschek	Tatnall	
31860-1	9.1	0.88	164		5	3137.83	3137.824	3137.825
62.	"	,,	1	3137.6				
63.9	,,,	,,			4	37.45		37.450
82.8	99	99			2n	35.59		35.590
91.8	33	22			0			34.710
98.5	,,,	"		01.0	1	20.01		34.047
31930.5	,,,	"	2	31.0	4	30.91		30.918
40.	,,,	"	ln	30.0				
48.	29	,,	ln	29.2				
55.	,,,	,,	1b	28.5		02.00		00.000
70.5	99	"		000	2	27.00		26.990
79.	,,,	"	1	26.2				05.000
90.8	,,	,,	1300	04.0	0		P	25.000
95.	,,,	"	ln	24.6	_	01.00		0.4 200
96.0	"	"		00.0	2	24.50	00.034	24.508
32003-1	"	"	4	23.8	6	23.81	23.814	23.818
10.	"	,,	1	23.1	0	07.00	01.000	21 000
23.0	"	"			6	21.89	21.873	21.879
28.0	99	97		27.0	0			21.381
30.	,,,	,,	2	21.2	_			00 814
34.8	"	"		00.0	0			20.714
42.	>>	,,	1	20.0				30.040
43.8	"	99		10.0	0			19.846
61.	22	, ,,	4	18.2				THE RESERVE
66.	>>	99	1	17.7				
77· 92·	"	,,,	ln	16·6 15·2				
93.4	"	"	2	13.7	5	15.02	15.026	15.027
32120	9.2	"	1b	12.4	3	15.02	15-020	15.027
39.		"	ln	10.6				
55.	"	"	2	09.0				
61.7	"	,,	4	000	2	08.40		08-405
86.	"	"	ln	06.1		00 40		00 400
89.1	"	29	111	001	4			05.756
95.8	"	"	1	05.2	4	05.11		05.110
32212	,,	"	2	03.5		00 11		00 110
21.4	"	"	1	02.7	4	02.65		02.634
43.	"	0.87	i	00.6		02 00	00.556	02 002
43.1	"			00 0	2	OCH TOTAL	00.407	CONTRACTOR OF THE PARTY OF THE
44.6	"	22	1		2		00 101	PARTY OF A ST
53.4	"	"	E VALUE OF		2 0	TOO IN THE WAY		3099-567
79.8	"	"	4	3097.0	2n	3097.06		0000 001
81.8				000.0	1	500.00	- 1 - 1 - 1	96.834
83.0	"	"			0	THE PARTY.	HE STATE OF	96.722
95.	"	"	ln	95.6	1-11-	took to		
32304-2	"	"	1	3 7 4	2	94.69		94.691
15.	"	"	6	93.7	131-	4 3 5		
15.7	"	"	TERRET	100000000000000000000000000000000000000	0	93.58	10 25-05-0	93.592
27.	"	"	2	92.5		30 00	B. St. St.	00 002
34.0	"	99	FIETE B	A PERSON	0	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	702 43 45	91.840
45.	"	"	4	90.8	The same		4-16-6-1	
47.9	"	"			2	90.52	VE TO S	90.506
55.6	99	"	ELECTION OF	15 - 15 - 1	0	0 25 200	30 15 15	89.775
58.7	,,	22	STEEN!		0		William B	89.480

RHODIUM-continued.

		Reducti	ctrum	Spark Spe		rum	Arc Specti	
Oscillation Frequence	ım	Vacui	Intensity	Wave- length	Intensity		Vave-length	V
in Vacuo	$\frac{1}{\lambda}$	λ+	and Cha- racter	Exner and Haschek	and Cha- racter	Exner and Haschek	Rowland and Tatnall	Kayser
32369·8	9.2	0.87		900##	2	3088-42		3088-428
79.2	"	"	1	3087.7	4	07.50		05 504
82.8	"	"			0	87.52		87.534
95.	"	"	ln	86.0	U			87.180
97.5	,,	,,		000	2	85.78		85.790
32415.3	,,	"	4	84.2	4	84.10	3084.081	84.078
21.	9.3	,,	1	83.5				
40.2	"	"	2	81.8	0			81.714
53·8 69·8	"	"	acce.		0			80.449
74.	"	99	1	MO. M	0			78.905
90.	"	"	ln 1	78·5 77·0				
92.0	"	""	1	110	2	76.75		76.736
32500-	"	"		E SE	6	10.19	76.006	10.130
03.	,,	15	1	75.8		408	,0000	
13.0	,,	"			2	74.82		74.806
17.	,,	,,	1	74.4				
22· 26·	,,	"	1	74.0				
39.	"	,,	1	mo. 4	0			73.550
45.	"	,,	ln	72.4				
50.	"	79	1	71.3	1			71.716
51.	"	"	4	113	3	71.15		71.134
59.	"	"			i	71 10		70.467
65.	,,	,,	1	69.9				,0 10,
74.	"	,,,	Tomas !		2			69.034
92.	,,,	19	2	67.5	6	67.42		67.395
32601	"	99		12	0			66.475
08	"	99			0			66.333
22	"	,,,	1n	64.5	U			65.800
29	99	"	ln	63.9				
31	,,	"	- Control	000	1			63.700
43	"	0.86	4	62.5	0			62.544
51	,,	,,		1-39-1	2	61.80		61.782
70	,,,	,,		70.0	0			60.001
76	"	"	2	59.9	2	50.45	-1	FO 450
81	"	"		ARES?	1	59.47		59·473 58·974
90	"	"	1	58.2				00.914
91	29	,,	1174		4	58.01		57.996
97	,,	,,	1	57.5				
32708 16	, ,,	,,			0	1600		56.452
24	"	"	6	55.8		55.76		55.755
32	9.4		ln	54.2	0			54.980
34	"	"	111	54.2	2	54.01		53.988
48	"	"	1	52.7		04 01		99.899
58	,,	"			2	51.83		51.780
68	,,	,,			2n	50.92		50.842
76	,,	,,	18		0	-		50.050
78 82	,,	"	1	49.6	0	Tax est		49.919

RHODIUM—continued.

	Arc Spect	rum		Spark Spe	ectrum		tion to	Marine .
1	Wave-length	. 10.000	Inten-	Wave-	Inten-	Vac	uum	Oscillation
			sity	length	sity	-		Frequency
	Rowland	Exner.	and		and		Parameter .	in Vacuo
Kayser	and	and	Cha-	Exner and	Cha-	λ+	1_	In Thous
	Tatnall	Haschek	racter	Haschek	racter		λ	
3049:334		3049-35	2		THE WAY	0.86	9.4	32784.6
0010 001		0010 00	-	3049.1	6			87.
49.003		49.00	0	00101		"	"	88.2
48.095		48.10	2			"	"	97.9
47.440		47.45	0			"	"	32805.0
		47.26	1	47·3c	6	,,	"	07.0
46.871		46.87	4	1		,,	"	11.1
46.304		46.30	2	46.3	1	,,	"	17.3
				46.0	î	,,		21.
45.887		45.90	3	1	1	,,	"	21.7
43.586			0			,,		46.6
		30 (12 = 1	HE BOOK	42.9	2	,,	"	54.
1		BUT STATE	100	41.8	ln	"	"	66.
		The state of		40.6	ln	,,	,,	79.
38.583			2n	38.6	1	,,	,,	32900.7
			1000	37.6	2	19	. ,,	11.
36.483			0			,,	,,,	23.4
A 5. 64 8		35.15	1	35.2	4	,,	,,,	37.9
34.474			0	BERRIE		,,	,,	45.2
		0.07 - 15		34.3	ln	,,	"	47.
		THE REAL PROPERTY.		33.0	ln	,,	,,,	61.
31.573			0			,,	"	76.8
			1000	29.6	1	,,	"	98.
28.975			0		DATE:	,,	9.5	33005.1
				28.8"	2	,,	,,	07.
28.545		28.57	4			"	39	09.5
27.817		27.82	1			,,	"	17.6
				27.1	ln	,,	,,	25.
27.053		27.05	2			,,	,,	26.0
				26.0	1	22	,,	37.
25.517		25.54	2			,,	,,	42.6
			E0	25.3	2	,,	,,	45.
			1	24.6	1	,,	,,	53.
24.018	3024.019	24.06	3.	184 530		,,	,,	58.9
23.164		The state of the s	0			,,	,,	68.4
22.673			0		STATES!	0.85	,,	73.8
22.117			0		W ENG	,,	"	79.9
		Selection and	E STORY	21.2	1	,,	,,,	90.
PER STATE			194 15	20.8	1	,,	"	94.
		20.60	153	Carlo Maria	1 May	,,	,,	96.4
19.928	William B	19.95	0	20.0	6	"	,,	33103
19.664	4	19.62'	2	THE ROBERT	NEW !	,,	,,	07.1
19.569		22 6 6 6	2	1	1	,,,	,,	07.8
18.194	The Park of		0	100000		,,	,,	22.9
17.225			1	17.2	2	,,	,,	33.4
16.930	THE STATE OF		ln	To Line Line	ELLI	,,	,,	36.8
15.960	THE LETTER		0	100000		,,	,,	47.4
	100000			15.0	1	,,	,,	58.
14.352	100	14.37	2		BE SHE	,,	,.	65.0
	THE STATE OF THE	10 90 h		11.8	1	,,	,,,	93.
11.021	THE RESERVE TO	EZ PEN	0		1997	,,,	,,,	33201.8
		1 1 1 1 1 1 1	1 (5)	10.5	ln	,,	"	08.
10.369	15 - 7 -	E HOLLE	0	PERCHASI	100	,,	,,,	09.0
	The Salata	1 1 1 1 1 1 1 1	133	09.7	4	,,	27	16.
		the second secon						

RHODIUM-continued.

		Reducti	etrum	Spark Spe	450 10	um	Arc Spectr	
Oscillation Frequence in Vacuo	um	Vacu	Inten- sity	Wave- length	Inten- sity		Vave-length	,
	1 _ `\lambda	λ+	and Cha- racter	Exner and Haschek	and Cha- racter	Exner and Haschek	Rowland and Tatnall	Kayser
33223.0	9.5	0.85	6	3009·1e	1	3009-10		3009-103
42.0	"	,,			1	07.38		
51.	,,	,,	1	06.6				
58.2	,,	,,	1	06.0	2	05.91		05.929
73.6	"	"	2	04.5	5	04.58	3004.555	04.565
97.	,,	"	1	02.4				
99.	",	"	1	02.2				
33306:	99	,,	wind Si		1			01.582
11.	"	"	1	01.2				
46.	0.0	"	ln	2998.0	200	2005 45		ALI -
52.	9.6	99	1	97.4	ln	2997.45		
54.	1)	22	1	97.3	0-12			
59.	,,	93	1	96.8	10,13		APPENDING TO	-X11-113-
67.	"	23	1	96.1	0			0005.000
72.	"	"	2	95.7	0			2995.828
33414	"	"	-	90 1	2	91.87		91.881
17.	"	"	ln	91.6"	2	31.01		31 001
27.	"	"	1	90.7				
33.	"	"		30 1	0			90.158
34.	39	"			0	90.07		90.048
41.	"	"	ln	89.5	2	30 07		90 040
43.	"	"	111	000	ő			89.302
46.	"	"	6	88.9b	0	88.97		88.977
52.	"	"	4	88.4	Ö	88.47		88.487
62.	"	"		00 1	3	87.56		87.568
64.	",	"	2	87.4		0.00		0.000
67.	,,	"	CHE WILL	Del Maria	5	87.11		87.117
69-	,,	,,	2	87.0				The same
72-	,,	,,	1	86.7				
76.	,,	,,	13/0		7	86.32	2986.321	86.330
78.	,,	"	4	86.2				
89.	,,,	,,	1	85.2				
95.	,,	,,			0	4		84.593
33500	"	99			0			84.135
06.	"	"	1	83.7		Mary Prince		
11.	,,	"	1	83.2	4	83.20		83.194
19.	"	0.84	1	82.5	3	82.51		82.514
26	"	"	1	81.9				
33	"	"	1	81.2	2	81.25		81.238
52	"	"	1	79.6	1 1	13546	No.	
72	, ,,	"	1	79.5	-	77.01		77.000
73	"	"	2	77.7	5	77.81		77.809
87	"	,,	ln	76.5	100	- 100	FIRST THE	
93	"	"	III	10.0	2	75.92	1000	75.935
96	"	"	ln	75.7	-	10.92	But the	10.999
33604	"	"	1	75.0	19	Control of	31 55 50 1	
13	"	"	i	74.2	3	74.15		71.156
23	"	,,	În	73.2		73.28	ST SECTION AND ADDRESS OF	11 100
31	"	"	1b	72.6		10 20	BOTTO HE S	
40	,,	"	1 3 16		0		NE WITTE	71.741
43	.,,	"	1	71.5		SV: The	A STATE OF THE PARTY OF THE PAR	1 121
51	9.7	"	In	70.8				70.807

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RHODIUM—continued.

Arc Spectrum				Spark Spectrum		Reduction to		
Wave-length			Inten-	Wave- length	Intensity and	Vacuum		Oscillation Frequency
Kayser	Rowland and Tatnall	Exner and Haschek	and Cha- racter	Exner and Haschek	Cha- racter	λ+	$\frac{1}{\lambda}$	in Vacuo
2968.790		2968.79	6	2968.7	4	0.84	9.7	33674.1
TO ENGLY				68.2	1	99	99	81.
CE.001		TOROLD VIN	0	67.1	1	"	"	93· 33708·0
65.801		65.26	2	65.2	1	"	"	14.2
65.018		00 20	ō			,,	"	16.9
				64.8	1	,,	,,	19.
63.664		63.64	2	63.6b	10	"	"	32.5
61.805		61.78	2	62.2	4	"	"	49· 53·7
60.773		01 70	0			99	"	65.3
60.686		M Call	0			99	"	66.3
				60.0	1	99	,,	74.
59.769		59.76	4			"	99	76.8
59.478		59.48	1 4			>>	"	80·0 86·7
58.899		58.89	4	58.7	1	"	"	89.
58.504		TO BE STATE	0	30 1	100	"	"	91.2
00 001				58.4	1	,,	"	92.
				57.6	1	,,	,,,	33801
State of the			100	57.5	1	,,	,,	03.
		PERMIT		57.0	1	,,	,,	08· 15·1
56.406			0			,,	"	17.2
56·229 55·942		Marie Allen	0			"	99	20.5
00 012		42.5		55.7	1	"	"	23.
55.541		55.54	2	55.5	1	,,,	"	25.1
55.395		55.43	2	***		,,	99	26.6
		TE SE		53.9	1	,,,	>9	44.
51.957		X MA COLOR	1	53.5	1	"	>>	66.1
91.997		The state	•	50.6	1	"	"	82.
50.023		50.02	2n			"	"	88.4
				49.8	1	"	,,,	91.
49.475		1	1		JEU SE	,,,	"	94.6
10.000				48.8	1	"	99	33902.
48.388			0	48.1	4	>1	"	10.
DUNE OF		1 1 5		47.6	4	"	"	16.
				46.7	4	99	,,	27.
46.042		46.03	2	46.1	1	"	,,	34.2
				44.9	4	"	9.8	47.
42.116		41.05	0	41.0	1	0.83	"	79·3 89·4
41.246		41.25	3	41.2	1	**	"	97.
40.175			0	30 0		"	"	34001.8
10 110				39.7	1	"	99	07.
39.588		39.58	2			,,	,,	08.6
38.403		38.39	2	00.0	4.5	"	,,	22.4
07.007				38.2	1b	"	"	25· 35·2
37.285			2	36.0	1	"	"	50.
				35.2	i	"	"	59.
34.988			0			"	,,	61.9

RHODIUM—continued.

		RH	ODIUM	-continued	<i>t</i> .		-	
	Arc Spect	rum	Buk.	Spark Spe	ectrum	Reduction to Vacuum		
V	Vave-length	Bar.	Inten-	Wave- length	Inten- sity	vacu	lum	Oscillation
Kayser	Rowland and Tatnall	Exner and Haschek	and Cha- racter	Exner and Haschek	and Cha- racter	λ+	$\frac{1}{\lambda}$	in Vacuo
				2934.2	1	0.83	9.8	34071
			15774	33.3	1	,,	,,	81.
				32.6	1	,,	,,	90.
2932.065		2932.07	4	32.1	2	,,,	,,	95·8 34101·
20.272		00.07		31.6	2	,,	,,	28.6
29.256		29.25	4	28.6	2	,,	19	36.4
28.559			0	27.0	6	,,	"	54.5
27·062 26·953		26.94	0	2.0		"	"	55.5
20.900		20 01	0	26·4b	1	"	"	62.
26.322			0	LEDELS.	1	"	,,	62.8
26.160			0		300	"	,,	64.7
24.140	SELVIVE	24.15	4	24·2b	8	,,	,,	88.2
23.239		23.23	4	23.2	1	,,,	,,,	98.8
21.229			0			"	9.9	34222:3
				21.0	1	,,,	"	25.
20.296			1	10.5	2	"	,,,	33.2
18 000		- 5 - 5		19.7	ln	19	"	71.0
17.028		15.50	0 3	17·0 15·5	2	"	"	89:
15.534		15.52	3	15.0	2	22"	,,,	95.
14.691			0	100		"	"	99.
14.114		14.09	3			"	"	34306
13.715		13.70	2	E) E I	100	,,	,,	10.
10,110		10.0	100	13.5	4	,,	,,	13.
13.474			0		No.	,,,	,,	13.
13.185			0			,,	,,	16:
12.746		12.74	3	12.7	1	"	,,	22.
10.281		10.30	4	10·3b	10	"	"	50.
09.837			0		15.	,,,	"	56.
07.835		07.00	1 3	07.3	2	"	"	79· 85·
07.335		07.33	. 3	07.1	2	"	"	89.
05.106		05.07	2	0,1		"	"	34412
09.100		0007	1	05.0	1	,,	,,	14.
				04.7	1	,,	,,	17.
04.440			0			,,	,,,	20.
				04.3	1	"	,,	22.
				04.1	1	"	,,,	24.
03.960			0			0.82	19	25.
03.428			2	000	1	"	19	32.
			0	03.0	ln	"	"	37
02.975		00.07	0 4			"	"	37· 71·
00.080		60.07	4	00.0	1	"	"	73.
2899.800		2899.79	2	000		"	"	75.
2099.000		2000 10		2899.0	1	"	,,	85.
97.806			0		1 6	,,	,,	99.
01 000			STORES	97.7	4	,,	,,	34500
97.171			0			- 22	,,	06.
Plant Ivies				96.2	4	"	10.0	18.
95.823			1			"	,,	22.
			120	95.7	2	17	"	24.
	100000	THE R. P. LEW.		93.3	In	12	1 74 1 56	53.

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RHODIUM-continued.

	Arc Spect		All such	Spark Spe	-			1
7	Vave-length		Inten-	Wave-	Inten-	Vac	tion to	0 31 4:
			sity	length	sity			Oscillation
A LANGE THE R. O.	Rowland	Exner	and		and		-	Frequency in Vacuo
Kayser	and	and	Cha-	Exner and	Cha-	λ+	1 - \lambda	
	Tatnall	Haschek	racter	Haschek	racter		^	
2893.142	The True		1			0.82	10.0	34554.5
92.817			4			,,	,,	58.4
92.320		2892.33	3			"	"	64.3
				2892.0	ln	,,	"	68.
Mark House			STATE OF	• 91.0	ln	,,	,,	80.
00.000		00.00		90.0	1	"	,,	92.
89·962 89·623		89.96	3			"	"	92.5
09.029			1	89.3	2n	"	"	96.6
89.222		89-21	3	000	211	"	"	34600
88.986		00 21	0			"	"	04.2
TOPE ALE				87.8	1	,,	"	18.
87.082			0			,,	,,	27.0
86.112		86.10	3			,,	,,	38.8
				86.0"	1	,,	,,	40:
07.004				85.4	1	,,	,,	47.
85.364			0	05.0	1	,,	,,,	47.7
84.683		84.67	2	85.0	1	"	"	52· 55·9
01 000		0401	4	84.3	2n	"	,,	99.9
			100	82.7	1	"	"	80.
82.497		82.50	4	82.5	1	,,	"	82.1
				82.0	1	,,	,,	88.
81.400		81.39	2	81.4	1	,,	,,	95.4
80.912	H. H.	80.91	2	81.0	4n	,,	,,	34701.2
80.775		80.80	1 0			"	"	02.8
79.628	tore eviden		0	79.3	1	"	"	16·7 21·
78.770		78.76	4	78.7	î	"	"	27.1
		.0.0		78.3	2n	"	"	33.
78.139			0			,,	,,	34.7
Pitalia Bara			130	78.0	1	,,	,,	36.
76.592	C. Carles		0			,,	,,	53.4
			-	76.2	1	,,	"	58.
75.764			2	7F.F	1	,,	"	63.4
				75·5 74·6	4	"	"	67.
74.507			0	14.0	4	,,	"	77· 78·6
74.115	No Contract	74.10	2			,,	"	83.4
73.742	1045	73.75	4	73.8	1	,,	"	87.8
	THE WHAT		A STATE OF THE STA	73.2	2	,,	,,	94.
73.104			0			,,	,,	95.6
P1 400		-1.40		72.0	ln	,,	10.1	34809
71.489		71.49	5n	70.8	1	"	,,	15.0
70.551		70.54	2	70.5	1	"	,,	23· 26·5
70.108		70.10	2	100		"	"	31.8
69.746		.0 10	ō	1	124	,,	"	36.2
			TIE !	69.0	ln	"	,,	45.
68.400		68.37	2	68.4	ln	,,	"	52.7
05.050	OL THE		1	68.3	2	"	,,	54.
67.973		65.55	1	67.5	9	"	,,	57.7
65.755		67·55 65·75	1 2	67·5 65·8	2 2	"	"	62·9 84·7
00 100		09.19	4	000	2	,,	"	04.1

RHODIUM—continued.

		пн	MOIGO	continue				
	Arc Spect	rum		Spark Spe	ectrum	Reduc		
7	Wave-length	Exner	Intensity and	Wave- length	Intensity and	-		Oscillation Frequency in Vacuo
Kayser	Rowland and Tatnall	and Haschek	Cha- racter	Exner and Haschek	Cha- racter	λ+	$\frac{1}{\lambda}$	III Vacuo
	AND TO THE		Treas.	2864.7	1	0.81	10.1	34898
2864.517		2864.51	3			,,	,,	99.8
				63.8	4	,,	**	34909
00.055		20.00		63.2	4	,,	"	16.
63·057 62·572		63.06	6		Enter:	19	"	17.6
61.877			0	100		"	"	32.0
010				61.7	1	"	"	34.
			10.50	61.0	1	,,	"	43.
60.886		60.84	4			,,	,,	44.4
60.774			3			"	"	45.5
60.208		F0.00	0 2	100000		"	"	52·4 56·4
59·908 59·735		59·86 59·73	2	59.7	1	"	"	58.2
09 100		29.13	-	58.2	ln	"	"	77.
			1 3 6	57.0	1	,,	,,	92.
		56.25	2	56.2	1	,,	,,,	35000.8
55.273	THE PARTY		4			**	,,,	12.8
54.848		54.84	2		1.80	"	,,	18.1
F4.00F				54.4	1	"	* **	24· 25·5
54.237			0	53.6	1	"	"	33.
			10 38	53.5	i	"	"	35.
		100		53.0	î.	,,	,,	41.
52.809			0			",	"	43.1
52.459			1	BE STORY		,,	,,,	47.4
W1 W20				52.3	ln	"	"	49.
51.526		The state of the	0	51.6	1	"	"	58.8
50.608	District Control		1	31.2	1	"	"	70.2
50 000		THE SEA		50.5	2	"	"	71.
49.461		49.43	2		1000	,,	19	84.5
			Total in	48.9	1	,,	,,,	91.
			1310	48.5	1	"	,,,	96.
45 000		1501		47.7	1	"	10.2	35106-
45·868 44·917	188	45.84	2 0	45·8b	8	"	"	40.2
44.917			0	44.6	1b	,,,	"	44.
44.463		44.45	4n	110	-	,,	,,	45.9
	The Later		Juli I	43.1	ln	"	,,	63.
42.270		42.24	4n	42.3	1	,,	,,	73.2
41.909	184 - 201	41.90	4n	41.0	1	"	,,	77.5
39.666		Parine		41.0	2	"	"	89· 35205·2
39.666		38.40	0 2	38.4	1	"	"	20.8
90 420		30.40	4	37.3	ln	"	"	35.
36.799		36.78	4	36.8	1	",	"	40.9
		Z Z		36.5	1	,,	,,	45.
35.671	HA EMPHA	35.61		35.6	1	"	,,	55.2
04.000	195 118	35.52				"	"	56.7
34.990			1	34.3	2	"	"	63.3
34.233	NAME OF STREET	34.22	3	24.2	-	,,	"	72.8
33.981	100	34 22	1	S COST		"	"	75.9
20 001			1			, ,,	1 "	

RHODIUM—continued.

	Arc Spect		IODIUM	Spark Spe	ectrum	Reduc	tion to	
	Wave-length		Inten-	Wave- length	Inten- sity	Vac	uum	Oscillation Frequency
Kayser	Rowland and Tatnall	Exner and Haschek	and Cha- racter	Exner and Haschek	and Cha- racter	λ+	1_\[\lambda \]	in Vacuo
N. State				2833.4	2	0.82	10.2	35283
2832.893		2832.87	2	32.6	1	"	,,	89·6 93·
31.398			0	020		"	"	35308.0
29.664		29.65	2	29.5	1	"	,,	29·8 32·
29.421		29.39	2			"	"	33.0
28.259			0	28.5	1b	"	,,	44· 47·2
40.400			U	27.5	1	"	"	57.
27.433		27.41	4	07.0	1	"	"	57.7
26.798		26.78	4	27·0 26·8	4 2n	"	"	63· 65·6
26.532		26.53	4			,,,	"	68.9
23·988 23·756			0			0.80	10.3	35400·7 03·5
23.504		23.47	2 2			"	,,	06.9
22·979 22·850		22.97	2 0			"	"	13·3 14·9
22 000			U	22.6	2	"	"	18.
07 000				21.8	1	"	"	28.
21.620			1	21.1	1	"	"	30·3 37·
20.946		20.95	3			"	"	38.8
19.742		19.72	3	20.8	1	"	"	41· 54·1
- ABURE				19·5c	8	"	"	57.
19.367		19.35	2	18.7	In	"	"	58·7 67·
16.979			1			"	"	88.7
14.817			0	16.8	2	,,	,,	91· 35516·0
14.011			U	13.9	2	"	"	28.
				13.4	2 2	,,	"	34.
				12·9 12·3	1	"	"	40.
10.000				11.6	ln	**	"	57.
10.999		11.00	3	10.8	1	"	"	64·2 67·
09.853			0	09.8	ln	"	"	78.7
07.270		07.25	2	07.6	ln	"	"	35607· 11·6
06.212		01.20	1			"	"	24.9
05.908		05.89	2	05.7	2	"	"	28·9 31·
04.020		04.03	2	05·7 04·1	4	"	"	52.7
		1 Several		02·4b	4	"	,,	73.
02-113			0	01.7	1	"	"	77·1 82·
01.674		01.68	3	01.6	1	"	"	82.6
00.021			0	00.9	ln	,,	"	93· 35703·7
2799.705			0			"	"	07.7
99.536			0	De la		,,	10.4	09.8

RHODIUM-continued.

		RH	ODIUM-	-continued	6.			
	Arc Spect	rum		Spark Spe	etrum	Reduct Vacu		
V	Vave-length	ı	Inten- sity	Wave- length	Intensity and			Oscillation Frequency in Vacuo
Kayser	Rowland and Tatnall	Exner and Haschek	and Cha- racter	Exner and Haschek	Cha- racter	λ+	1 <u>λ</u>	
			MITE	2798.3	1	0.80	10.4	35726
			B	97.9	1	,,,	99	31.
			1 10 15	97.1	ln	,,	99	41.
2796.743		2796.75	3	1		"	99	50.
				96.4	1	99	"	57.2
95.824			2	95.6	ln.	"	"	60.
0 - 900		95.37	1	30 0		"	,,	63.1
95·366 94·587	M. W. S. L. S.	30 01	Ô			,,,	"	73.1
94.020		La state	2	94.0	1	,,,	"	80·3 94·9
92.886		92.88	2	92.8	4	"	"	35815.6
91.270		91.27	4	91·2 90·9	ln 4	"	"	20.6
90.872		90.88	2 2	90.9	-	"	"	25.5
90.493		90.50	4	89.1	ln	,,	"	43.
86.934		86.93	2		1	,,	"	70.6
85.920		0000	0			, ,,	"	84·4 92·
00 020				85.3	1	"	"	99.
	19397-19		PASS I	84.8	1	"	"	35905
				84·3″ 83·6	i	0.79	"	14.
	M. Valence	83.14	5	83.2	î	,,	"	20.2
83.140	Phylodeles	99.14	0	82.8	1	,,,	,,	25.
				82·0b	6	,,	"	35· 45·5
81.184			1	81.2	1	"	,,	53.
01 101				80.6	ln	"	"	55.1
80.439		80.45	3	79.8	1	"	"	63.
		79.65	3	130		,,	,,	65.3
79.654		78.96	b		The state of	,,,	,,,	74.2
78.967	The state of	.000		78.8	1	,,,	"	76· 82·
				78·4b	6	27	"	84.6
78.162		78.16	4	HC.0	6	"	"	36013
		== 00	3 2	76.0	0	"	"	14:
75.869		75.86	2	75.21	1	"	10.	5 23.
74.557		74.56	3 2		-	99	,,	31:3
14.001		A VISION		74.4	4	"	,,	46.
73.397			2	=0.0	4	"	"	49.
			105	73·2 72·5		"	"	58.
		71.63	3 4	120		"	,,	69.
71.615		11.0	3 4	71.2	1	,,	,,,	75.
70.277			1		5 33	99	,,,	36112
68.336		68.3		68.3	1	"	,,	18
67.832		67.8		67.8	b 1 4	"	"	34
		66.6		66.6		"	"	57
64.909)	64.9	2 2	64.2		,,	,,	66
				64.0		"	,,	69
62.938	3	62.9	4 2		AS LO	"	,,	82 91
62.31			0	62.3	-	"	"	26204
		34	-	61.3	3 2	"	"	14
60.54	1	60.5	55 2	and the same	1	"	, ,,	19 11 11

RHODIUM-continued.

			RI	HODIUM	-continued	d.			
-		Arc Spect	rum		Spark Spe	ectrum	Reduction to		
		Wave-length		Inten-	Wave- length	Inten- sity	Vac	uum	Oscillation
-	Kayser	Rowland and Tatnall	Exner and ' Haschek	and Cha- racter	Exner and Haschek	and Cha- racter	λ+	$\frac{1}{\lambda}$	Frequency in Vacuo
					2759.7	1	0.79	10.5	36225
-					59.3	ln	,,	,,	31.
-		4 10 10			57.6	ln	,,	,,	53.
1	2757.005			1.			"	"	60.7
1	54.845			0	• 56.9	2	"	"	62· 89·2
	01010			0	54.3	4	"	"	96.
-					53.3	i	"	,,	36310
1				1	53.2	1	,,	,,	11.
	20.041			110000	53.1	1	,,	"	12.
	52.941		2752.95	2	50.0	0	"	"	14.2
				R. Service	52·3 51·6	2	"	"	23· 32·
1	51.450	FIG. CO.	51.47	2	310	1	,,,	"	34.0
	51.140			0			"	10.6	38.0
			49.38	1	1 1 1 1 1 1 1 1		"	,,	61.2
					48.4	1	,,	,,	74.
-				Britis.	47.7	4	,,	,,	83.
					45·8 44·8	1 1b	"	"	36409.
1	43.568		43.55	0	440	10	"	"	38.4
1	10 000		41.85	2	41.8	1	0.78	"	61.1
-					41.7	1	"	,,,	63.
1	40.647		40.63	2			,,	"	77.2
	40.487		40.00	0			,,,	"	79.3
İ	40·304 40·027		40·30 40·00	2	40.0b	8	"	"	81.7
1	39.845		39.80	i	40 00	0	',,	",	85·6 88·1
1	38.359		38.34	2			"	"	36507.7
	37.717		37.67	2			**	,,	16.5
-	37.509		37.47	2	37.5b	8	,,	"	19.2
	36.860		36.84	3	36.8	1	"	"	27.9
-		LO FOR		No.	35·7 35·2	l l	"	"	43· 50·
-	34.906		34.89	2	50 2		"	"	53.8
		101	Lane de	Charge and	34.2	1	,,	,,	63.
-	32.261			0			"	,,	89.1
	31.874	The Carlotte Control		0	01 =		,,	,,	94.3
		1000			31·7 30·8	1 4	,,	"	97· 36609·
	29.611	HE WALL		0	29.7	1	"	"	24.7
	29.034		29.00	6	29·1b	6	"	"	32.6
				GINE	27.7	1	,,		50.
	26.934			0			,,	10.7	60.5
	25.961	TO THE WAY	THE IS	0	0~0	195	"	"	73.6
					25·8 25·1	1 1	" "	,,	76· 85·
					24.1	1	"	"	99.
				1788-1	23.1	î	"	"	36712
	CP131-11-12			1518	22.9	1	,,	"	15.
	22.389	1		0	22.3	1	"	,,,	21.7
	22.243	(Section)	22.23	$\frac{2}{2}$	20.6	1	"	"	23.8
	20.235	6.10	20.60 20.23	3	20.0	-	"	"	45·9 50·9
	200	1	20 20		The second second	1700-11	,,	"	000

RHODIUM-continued.

	Arc Spectr	um	E	Spark Spe	ectrum	Reduct	ion to	
7	Wave-length		Inten- sity	Wave- length	Inten- sity	Vacuum		Oscillation
Kayser	Rowland and Tatnall	Exner and Haschek	and Cha- racter	Exner and Haschek	and Cha- racter	λ+	$\frac{1}{\lambda}$	Frequency in Vacuo
				2720:1	1	0.78	10.7	36753
2718-640		2718.63	2		Variation 1	,,	,,	72.4
100 100				18.5	i	,,	"	74.
18.111		17.56	0 3	18.1	4	"	"	79·6 86·7
17.606		17.50	3	17.4	1	"	"	89.
16.912		16.89	2	Z/	100	"	"	95.9
16.645		1	0	16.7	1	,,	"	99.4
15.399		15·40 15·14	2 2	15·4b	8	,,,	,,,	36816.3
15·149 14·881	Cal Partico	10.14	0	120 (37.0)	0.00	"	"	19·8 23·3
14.499		14.50	4			"	"	28.5
				14.3	1	,,	,,,	31.
00.619		09.60	3	13.3	2	"	,,	45.
09·613 07·896		09.00	On		17533	"	"	95·0 36918·3
07.320	B 82 1 5 - 11	07.32	2	07.3	1	"	"	26.2
		49.8.12		06.7	2	,,	"	35.
06.135		05.73	2 3	05·7b	10	"	,,	42.4
05·718 05·059		05.05	0	03.10	10	"	"	48·0 57·1
00 000	Series Inc.	00 00		04.9	4	"	"	59.
03.820		03.84	6	BE Walt		,,	,,	73.9
				03.7	1	,,	,,	76.
				03.3	1	"	"	78· 81·
02.621			0		P. W.	"	168	90.3
02.337		02.33	2		1 18	,,	,,	94:3
02.158		02.17	2	01.0		"	,,	96.6
00.688		00.69	1	01.3	1 4	"	"	37008
00.384		00.39	2	00,	1	"	"	20.9
				2699.9	2	,,	"	28.
2005 055		0007.05	2	99.0	ln	0.77	,,	40.
2697.955		2697.95	2	97.1	2		,,	54.3
				96.0	4	"	"	81.
94.405	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	94.40	4			"	"	37103-2
09.700		09.79	0-	94.3	2	,,	,,	05.
93.726		93.73	2n	93.5	2	"	,,	12:8
		STERE E	1000	92.9	1	"	"	24.
92.390	PALE TEN	TIE UNE TO SE	2	92.4	1	"	"	30.8
		12 8	1	92.2	1	"	,,	34.
		7 - 12 5	PER STATE	91.2	4	"	"	47· 58·
89.716	100	89.71	0	89.7	4	"	"	67.9
89.022	THE TREE	CHILDS.	0			,,	"	77.4
00.150	12 11 11	00.10	9	88.3	1	"	,,,	87:
88·173 87·411		88·18 87·40	2 2			"	"	89.1
87.015	PACTOR (NO	87.01	3			"	"	37205.2
	张作 元	-	1	86.7	1	",	"	10.
86.608	LI ESEDE	86.63	3	1 3 - 3 - 1	1	,,,	,,	10.7

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				Spark Spectrum			tion to	
V	Vave-length		Inten- sity	Wave- length	Intensity	Vacuum		Oscillation Frequency
Kayser	Rowland and Tatnall	Exner and Haschek	and Cha- racter	Exner and Haschek	and Cha- racter	λ+	$\frac{1}{\lambda}$	in Vacuo
2685.551			0	2004.4		0.77	10.8	37225.5
84.301		2684.30	2	2684.4	8	"	"	41.
83.660		83.66	0	83·7b	8	"	"	42·9 51·7
82.624		82.64	2		0	"	"	52.1
81.873		81.87	3			"	"	76.6
				81.7	4	,,	,,	79.
80.717		80.72	4			"	,,	92.6
80.379		80.37	2	=0.0	COPPE S	"	"	97.4
70.579		FC.FF	0	78.8	1	"	10.9	37319
76.573		76.55	2	76.4	4	"	"	50·5 53·
76.200		76.18	4	10 4		"	,,	55.6
74.525		74.52	2	74·5e	8	"	"	79.0
74.287		74.29	2			"	"	82.1
74.059		74.05	2	74.0	2	,,	"	85.5
			Section 1	72.9	1.	,,	,,	37402
				72.2	1	"	"	11.
F1 F00				72.0	1	"	"	14.
71.529		71.15	1 3	71.0	1	"	,,,	20.8
71.144		71.15	9	71·2 70·1	1	"	"	26·2 41·
69.419			0	101	W. Bay	"	"	50.4
00 110				69.3	4	"	"	52.
the same				68.5	2	"	,,	63.
67.453			0			"	"	78.0
67.317			0			,,	,,	80.0
00 100		00 51		67.2	2	"	"	82.
66.498		66.51	2	65.3	1	99	,,	91.4
William !			CONT.	64.9	1	**	"	37508· 14·
			To the	64.6	2	"	"	18.
63.764		63.77	2	63·7b	6	"	"	29.9
63.389			0			"	,,	35.2
			3	62.1	1	,,,	,,	53.
			Name 1	61.7	1	"	,,	59.
59.937			1			"	"	84.0
59.573		50.10	2 2	59·1b	0	"	"	89.1
59·098 58·515		59.13	0	99.10	8	"	"	95·7 37604·1
90 919			0	58.4	2	"	"	37004
2000		THE SECTION		57.3	4	"	"	21.
		17.11	The late	56.4	În	"	"	34.
56.000		56.00	2			,,	,,	39.7
52.750		52.76	5		1.00	0.76	11.0	85.7
F1 0F6				52.6	1	,,	,,	88.
51.973			0	51.01	70	"	",	96.8
50.985			0	51.8b	10	"	>>	37710.8
49.686		49.69	1	1 13 WE		,,	"	29.3
20 000		10 00		49.5	1	"	"	32.
Total State of			1975	49.0	î	"	"	39.
48.681		48.67	2			"	**	43.7
47.375		47.38	3	47.3	1	,,	,,	62.2

		Arc Spect	rum		Spark Spe	ectrum	Reduction to		
	The state of the s	Wave-length	de ant	Inten-	Wave- length	Inten- sity		uum	Oscillation
	Kayser	Rowland and Tatnall	Exner and Haschek	and Cha- racter	Exner and Haschek	and Cha- racter	λ+	$\frac{1}{\lambda}$	Frequency in Vacuo
			2647.07	1			0.76	11.0	37767.5
					2644.2	1	,,	,,	37808
	2643.691		43.68	2			,,	,,	15.0
	43.077		43.10	3			,,	,,	23.5
	42.857			0	42.8	4	,,	,,	26.8
					41.7	4	,,	,,	43.
					40.6	2n	,,	,,	59.
	90 905				39.8	1	,,	,,	71.
	39.327			0	90.01	000	"	,,	77.4
	20.00			0	39·2b	4	,,	"	79.
	39.097		90.04	0	90.0	HAT.	,,,	"	80.7
1	38.839		38.84	2 0	38.8	4	,,	,,,	84.4
	38.388	The state of the s	38.39				"	>>	90.9
-	37.484			0	0=0		,,	"	37903.9
	36.744			100	37.0	In	"	"	11.
	30.144			1	90 =		"	"	14.6
	1000		25.40	,	36.5	1	,,	"	18.
	87 E. S.		35.40	1	97.91	0	,,	,,,	33.9
1	35.082		25.05	9	35·3b	6	,,	,,	35.
1	34.605		35.07	3	04.0		**	"	38.6
	33.523		99.50	0 2	34.6	4	"	"	45.4
1	33.373		33·50 33·40	2	99.4		"	"	61.1
1	99.919		33.40	Z	33·4 32·7	1	"	"	62.9
1	THE REAL PROPERTY.			No. of Lines	31.3	1	"	"	73.
Ì	30.509		30.49	2	31.3	1	"	77	79.
1	30 303		30.49	4	30·3b	4	,,	11.1	38004.4
	30.003		30.00	2	30 30	4	"	"	07.
	28.222		28.22	0	28·2b	8	"	,,	11·7 37·4
1	20 222		20 22	0	27.9	2	"	,,	42.
1	27.042			0	413	4	,,	,,	54.5
-	26.776		26.77	2	26.7	4	",	"	58.4
-	25.973		26.00	3	26.0	1	"	"	69.9
-	25.496		25.51	i	25·5b	8	"	"	76.8
1	25.309		25.33	2	20 00	0	"	"	79.5
	24.948		24.96	0			,,	,,	84.8
1	24.821	33 5 5 5 6		0	24.8	2	,,	"	86.7
-	22.756	E WAR	22.70	1		18 61	"	"	38117-1
1	22.661	3.		4	22.6	2	"	"	18.1
1	ALE TO SE			all le	21.2	ĩ	"		39.
-	21.099		21.12	2	1 1 1 1	10	"	,,	40.7
-	200			300	20.0	1	"	"	57.
1	- Contractors			100	19.0	î	"	"	71.
1	18.596		18.61	3			"	"	77.2
1			The second second	Nies -	17.8	ln	"	"	89
1				1	17.1	1	,,	"	99.
	16.178		16.17	2		THE REAL PROPERTY.	,,	,,	38212.7
	Tribe - I			1	16.0	1	,,	,,	15.
-	15.735		15.74	2			"	"	19.0
	CRIT			1 9	15.4"	1	,,	,,	24.
				THE REAL PROPERTY.	14.7	1	"	"	34.
1	The state of the s			KES 185	13.8	1	,,	,,	47.
1	13.689		13.70	4n	13.6	1	,,	"	48.9
400	13.145		13.19	0			"	,,	56.6

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		Reduction to Vacuum		Spark Spectrum		Arc Spectrum				
Oscillation	uIII	vacu	Inten-	Wave-	Inten-		Wave-length	7		
Frequenc		1	sity	length	sity		WWW. Tongon			
in Vacuo	-	16.30	and		and	Exner	Rowland			
	1_	λ+	Cha-	Exner and	Cha-	and	and	77		
	λ		racter	Haschek	racter	Haschek	Tatnall	Kayser		
38269-1	11.1	0.76	I TOLK		0			2010 015		
77.			2	2611.8	U			2612.315		
83.	"	"	ĩ	11.4				1.50		
99.	"	"	i							
38300.8	"	, ,,	1	10.3						
07.	"	0.75	1	00.7	0			10.156		
13.8	11.2		1	09.7				THE PARTY OF		
18.		"		00.01	0	2609.26		09.266		
22.9	"	"	8	09·0b		and and				
28.	"	"			2	08.64		08.639		
	"	,,,	1	08.3	1000					
34.9	,,	,,,	The same	Tall Land	2	07.83		07.831		
53.	,,	,,	1	06.5	4	06.55		06.540		
64.	,,	,,	1000	Name and	2	05.80		05.807		
87.	,,	,,,	2	04.3	1 3 2 -	PARTIES		30 001		
98.	"	,,	15000	The same of the	4	03.51		03.500		
38402	,,	,,,	2	03.3	1 1 1 1 1			09 900		
21.	,,	,,			0	STATE OF THE		01.926		
28.	,,	,,,	2	01.5				01 920		
41.	,,	,,	2	00.6						
55.	,,	,,	1	2599.7						
59.	,,	"	î	99.4	0	The state of		2500 050		
75.	"	,,,	î	98.3	0	The same of		2599.352		
77.	"	,,	-	30 9	2	0500.00		The state of		
83.			1	97.8	2	2598.20	7725 7 5	98.166		
87.	"	17		310	2	97.80		97.774		
92.	"	"		The level	1	07.10	THE PARTY	97.484		
94.	"	"	8	07.01	0	97.16				
38507	"	"	0	97·0b	3	97.06		97.014		
20.	,,	"		0.0	0	A COLUMN	0 120 OIL 10	96.134		
47.	"	"	2	95.3						
65	"	"	4	93.5	Des les					
	" "	"			0	92.26	1 1 1 1 1 1	92.247		
68	"	"	6	92·1b	1	1 2 2 2 2 2	THE PARTY			
85	"	,,		The Park	1	90.91	Black No.			
87	"	,,	1	90.8		1111				
38600	"	,,	1 3 1 2	I lave by it	1	THE STREET	1 3	89.892		
20	,,,	,,	1 1 1 1 1	A LONG BOOK	0n	88.55	LED E	88.545		
38	11.3	,,	4	87·3b	0			87.353		
39	,,	,,			2	87.25	E STATE OF	87.245		
45	,,,	,,	la La Co	1 5000	2	86.90	Set Bitte	86.897		
52	,,	19	4	86.4		0000	ENIEN DON	00 001		
88	,,	,,	1		1	17,5210.	1000	84.016		
99	,,	,,	1	83.3		H HERE	10000	84.010		
38708	,,	,,	2	82.7		THE REST	To Cite a			
21	,,	,,	PAGES		0	81.80	WAS BUT	01.700		
24	,,	,,	4	81.6b	·	01 00	The second	81.790		
31	,,	,,		02 38	2	81.14	1	01.100		
41	,,	,,	2	80.5	-	01.14		81.100		
47	"		3	00 0	0		The state of	00010		
53	"	"	2	79.7	U	SVE	DE ISWALL	80.043		
53	"	"	1	19.1		F0.04		- 12 AND		
56	1300	"				79.64		79.650		
60	.,,	"	1	FO.0	2	79.49	Contract of	79.487		
	"	"	1	79·2 77·9			A DESIGNATION			
80		99								

RHODIUM—continued.

	Arc Spec	trum		Spark Spectrum			tion to	1
	Wave-length		Inten-	Wave- length	Inten- sity			Oscillation
	Rowland	Exner	and		and			in Vacuo
Kayser	and	and	Cha-	Exner and	Cha-	λ+	1_	
II ay SCI	Tatnall	Haschek	racter	Haschek	racter		λ	
2576.330		2576.32	3			0.75	11.3	38803.7
		75.85	2			,,	,,	10.8
74.751		74.75	2	2574.7	ln	,,	"	27.4
74.332		74.33	2n			,,	"	33.8
73.577		73.60	2n			,,	,,	44.9
			KORD -	71.6	ln	,,	. ,,	75.
			PER S	70.4	1	,,	,,	93.
70.206		70.20	2			,,	,,	96.1
69.171		69.16	0	000		,,	"	38911.8
			Market .	69.0	4	5,	"	14.
CM.OMA		CH.OH	1	68.8p	4	"	"	17.
67.374		67.37	4	00.0		"	11.4	38.9
66·960 66·137		66.95	2 2	66.9	1	"	"	45.3
00.197		66.13	4	66.0	1	"	"	57·7 60·
65.888		65.86	2	00.0	1	"	"	61.7
09 666		00 00	4	65.1	2	"	"	73.
64.900			0	05.1	4	0.74	**	76.5
01 000				64.3	1		"	86.
				63.7	î	"	,,,	95.
62.741		62.75	On		300	"	"	39009-2
			1997	62.6	1	,,	"	11.
			1900	62.0	2	"	"	21.
60.322		60.33	2			,,	,,	46.1
		60.02	1			,,	,,	50.8
3000				59·8b	4	,,	,,	54.
58.714		58.76	4	. 58.7	1	,,	,,,	70.4
				57.8	2	,,	,,	85.
		WA 00		57·1b	6	"	"	95.
56.172		56.98	1			"	,,	97.2
55.449		EE.4E	1 4			"	- "	39109.6
99,449		55.45	4	EF.9	2	"	"	20.6
55.010		55.00	1	55.3	Z	"	"	27.5
35 010		33 00	75 L	54.7	1	"	"	32.
53.426	72.3	53.42	On	OI.	200	"	"	51.7
	THE STATE OF THE S	00 12	OII	53.1	1	"	"	57.
		LIKE STATE		52.3	î	"	,,	69.
51.289		51.30	2	2001	Service !	"	"	84.4
	STARTING A	Sale Miles	Marie !	50.6	1	,,	"	95.
		- Sint of		49.6	1	,,	,,	39210
48.679		48.67	2			,,	11.5	24.6
		47.75	1			,,	,,	38.8
15 000	E SHE HILL			47.6	1	,,	,,	41.
47.366	AND BE		0			"	,,	44.7
45.794		45.79	4			"	"	69.0
44.917		45.44	1	1 45·4b	8	"	,,	74.4
44.317	THE RES	44.30	2	44.0	1	"	"	91.9
43.648		43.63	0	44.0	4	"	"	97.
10 010		49 09	0	43.4	1	23	"	39302.3
41.096		41.11	2	41.1	2	"	"	41.5
39.860	-2000	39.88	4n	411		"	**	60.6
		0000	1 -31-44	39.7	1	22	"	63.

S

RHODIUM—continued.

	Arc Specti	ODICI	Spark Spectrum		Reduction to		1	
V	Vave-length		Inten-	Wave-	Inten-	Vacu		Oscillation
			sity	length	sity			Frequency
	Rowland	Exner	and Cha-	72	and Cha-		1_	in Vacuo
Kayser	and Tatnall	and Haschek	racter	Exner and Haschek	racter	λ+	λ	
Tax Tax	No. (A)			2539.2	1	0.74	11.5	39371
		0×0× 00		38.6"	1	"	"	80.
0505 501		2537.80	1 2	37.7	4	,,	"	92.7
2537·721 37·155		37·72 37·16	3	37.1	1	"	"	39402.7
36.803		36.80	3	36.8	ī	"	,,	08.2
0000			HUND	36.2	1	,,	,,	18.
				35.7	1	,,,	,,	25.
T-HEDAY (S)				35.3	2	"	"	32.
34.682		94.10	0 2	34.6	4	","	"	41.2
34.170		34.18	2	34.0	1	"	"	52.
33.687		33.70	2	010	H. BELL	,,	"	56.6
33 001		00 10	-	33.5	2	,,	,,	60.
32.743		32.79	2			,,	99	71.0
			10 25 5	32.3	2	,,		78.
31.920		31.85	2	21.2	1	"	"	84.8
31.369			0	31.3	4	"	"	97.7
31·053 30·284			0			"	11.6	39509.7
30 204				29.3	2	"	,,	24.
				27.3	.1	,,	,,	56.
		27.14	1	100000		,,	,,	58.8
26.744			0	26.7	1	,,	"	65.0
26.244		26.25	2			.99	"	72·8 75·2
26.092		26.10	1	26.0"	1	"	"	77.
25.221		25.21	0	200	F 100	"	"	89.0
100		24.36	1			,,	"	39602.4
12.70				23.4	2	,,	"	17.
22.988		22.98	2n	99 #	L TUE	"	"	24·0 28·
>			100	22·7 21·4	1	"	"	49.
20.623		20.66	2	214		"	"	60.8
20.023		20 00	-	20·5b	8	"	"	63.
				19.3	2	,,,	,,	82.
18.561			0		100	,,	"	93.6
A STATE OF THE STATE OF		,,,,,	1	17.5b	. 4	0.73	"	39710
15.833		15.84	2	15.7	1	"	"	39.
	100000		1	15.3	2	"	"	45.
		14.82	ln	100	Toronto.	,,	,,	52.7
	35 B			14.7	1	,,	,,	55.
13.464	TATE OF THE PARTY.	13.50	2		13000	,,	"	74.1
10.100	HE HICKLE	10.10		13.3	1	,,	"	77· 94·4
12.180	Total and the same	12·19 11·15	2 2	11.2	2	,,,	11.7	39810.8
11.133		10.88	1	11 4	-	"	,,	15.0
10.747		10.75	2	BY REFE		,,	"	17.1
				10.6b	8	,,	,,	19.
09.788		09.81	2		19.84	,,	"	32.1
REM SER CO.		00 80		09.6	1	"	"	35· 49·0
08.743	The second second	08.73	0	08.1	2	,,	"	59.
E HERE	100		1	00 1	4	" "	,,	

RHODIUM—continued.

	Arc Speet	rum	6 198	Spark Spe	ectrum		tion to	
	Wave-length		Inten- sity	Wave- length	Inten- sity	v a.e.	uum	Oscillation Frequency
Kayser	Rowland and Tatnall	Exner and Haschek	and Cha- racter	Exner and Haschek	and Cha- racter	λ+	1_\[\lambda \]	in Vacuo
2507.342		2507:35	0			0.73	11.7	39870.9
02.20		0==0		2506·1	1	"	,,	91.
05·758 05·189	B 158 2 B	05·76 05·20	$\frac{2}{2}$	05·1b	4	"	,,	96·4 39905·4
04.384	1000	04.39	4n	00 10		"	"	18.2
03.939			1			"	"	25.4
00.450	THE STERNING			03.8p	2	,,	"	28.
03·458 02·843	15.00		0			"	,,	33·0 42·9
02.546		02.55	2	02.6	1	, ,,	"	47.5
	Post Park			02.4	-1	,,	,,	50.
	THE PART		14.	01.3	2	,,	,,	68.
01.115	STATE OF THE STATE	01.10	1 0			,,	,,	70.6
00·740 00·668	10000	00·74 00·67	2			"	"	76·5 77·6
00 000		2499.81	ī			"	"	91.3
				2499.2	2n	"	,,	40001
2499.095		99.10	2n			,,	,,,	02.7
				98·1 96·8	2n ln	"	"	19.
				96.0	11	99	"	40· 52·
94.604		94.61	4n	000	ME S	"	"	74.8
				94.3	1	"	,,	80.
93.733	and the	93.73	1	00.4		"	11.8	88.8
92.395		92.39	2	93.4	ln	"	"	94.
92-393		91.93	1			"	"	40110.3
		02 00		91·8b	4	"	"	18.
90.860		90.85	3		13.0	"	,,	35.0
00.000		00.00	0	90·7b	10	"	"	38.
89.986		89.98	0	89.8	1	"	"	49·1 52·
				89.2	î	"	"	62.
88.547		88.54	1			"	"	72.3
		00.04	abit any	88.3	2	"	"	76.
87.581		88·24 87·60	$\frac{1}{4}$			"	"	77.3
01.001		01.00	4	86.7	1	"	"	87·7 40202·
85.688		85.67	2	85.7	4	"	"	18.6
				84.6	2n	,,	,,	36.
83.423	ELECTRONS.	83.41	2n	09.9	435	. 33	,,	55.3
				83·3 82·7	1 4	,,	"	57· 67·
		82.15	2			"	"	75.9
81.686			0			,,	.,,	83.4
00.001		90.04	0	81.2	2	"	,,	91.
80·921 80·596		80·94 80·60	0			"	"	95·7 40301·1
00 000		00 00		80.4	4	"	"	04.
THE REAL PROPERTY.	Dirth ACC	79.85	2			"	"	13.2
				79.1	1	,,	,,	25.
77.618		77.61	1	78.6	1 1	19	"	34.
11.019	THE DEL CO.	17.01		77·6 77·2	2	"	"	49·6 56·

150

RHODIUM—continued.

	Arc Spectrum			Spark Spe	ectrum		tion to	5		
Wave-length		Wave-length		Wave-length		Wave- length	Inten- sity	Vac	uum	Oscillation Frequency
Kayser	Rowland and Tatnall	Exner and Haschek	sity and Cha- racter	Exner and Haschek	and Cha- racter	λ+	$\frac{1}{\lambda}$	in Vacuo		
2475.978	Personal man	Con Vacabio	0			0.73	11.9	40376.2		
75.749		2475.72	0			,,	"	80.1		
			11.	2475·6b	8	,,	,,	82.		
75.097		75.11	4			,,	"	90.5		
74.677		74.67	1	74.1	1	"	,,	97.5		
74.116		74.12	0	74.1	1	"	"	40406.5		
E0.100		79.90	2	73.4	1	"	"	18· 21·5		
73.199		73.20	1			"	"	24.8		
F0.FF1		73.00	2			"	"	31.9		
72.571		72.56	4	71.7	2	"	"	46.		
71.561		71.56	2	111	-	,,	"	48.4		
		11.90	0			"	"	59.8		
70.860			0	70.6	1	"	"	64.		
70.486		70.50	2	.00	Sino:	"	- "	65.9		
10.400		10 30	-	69.6	1	0.72	"	80.		
69.203		69.20	1	000	-	,,	",	87.0		
05 205		05 20	-	68.8	1	,,	"	94.		
				68.2	ī	,,	,,	40503		
		PAN LA TA	10 35	67.1	i	"	"	22.		
			lus I	66.1	î	,,	37	38.		
		The same	-	65.2	ln	"	"	53.		
63.670		63.70	4n	002		"	"	77.7		
03.010		00 10	111	63.4	2	"	,,	82.		
		62.74	1	00 1		"	,,	93.3		
61.120		61.14	2			,,		40619.8		
01 120		01 14	1 -11	61.0b	8	,,	"	22.		
59.237		1	1	0200		,,	12.0	51.0		
59.004		59.00	2	59.0b	6	"	,,	54.9		
56.277		56.26	1	56·2b	4	,,	"	40700-2		
55.788		55.79	2	55.7	8	"	"	08.1		
55.521		00.10	0			"	"	12.5		
53.898			0	100000000000000000000000000000000000000	10	,,	"	39.5		
00 000				52.1	1	,,	,,	69.		
		PLEA	The state of the s	51.0	1	"	,,	88.		
50.660		50.67	3			,,	,,	92.2		
00 000				50.5	1	,,	,,	96.		
	59 5 S AF		FUR	49.5	ln	,,,	,,	40813		
		49.15	2	TO SUFFERENCE	Branch.	,,	,,	18.5		
48.923		48.92	2 .	N. S. S.		,,,	,,	22.3		
		1		48.8	ln	,,,	,,	24.		
48.378	The state of	48.36	0	NEW TENTE	1000	"	"	31.5		
		119 5 7	1	47.8	. 4	"	,,,	41.		
			18.	47.4	1	,,	"	48.		
		The same		46.8	1	,,	,,	58.		
45.714	THE STREET	45.70	2		N. T.	"	,,	76.0		
		-	1 1	45.2	2	,,	"	84.		
44.843	AN SER		0 .	44.8	1	"	,,	90.4		
44.337	A STATE OF THE STA	44.35	4n			,,	,,	98.8		
	Sur Ville	The Party of the		44.2	2	"	"	40901		
43.812	Verification in	100000	0	Park and	1500	"	12.1	07.6		
43.221	LEC 1	A SULLY	0	000000000000000000000000000000000000000	THE REAL PROPERTY.	"	"	17.5		
42.830	146 7 36	1178 11-5	0	11.6	153	"	"	24.0		
	1 - 1 - 10		1	41.3	1	, ,,	29	50.		

RHODIUM—continued.

	Arc Spect	rum		Spark Spe	ectrum	Reduc	tion to	
7	Vave-length		Inten-	Wave-	Inten-	Vacuum		Oscillation
			sity	length	sity			Frequency
77	Rowland	Exner	and Cha-	Ti	and Cha-		1_	in Vacuo
Kayser	and Tatnall	and Haschek	racter	Exner and Haschek	racter	λ+	λ	
	001-110			2440.6	1	0.72	12.1	40961
2440.427		2440.45	2	20.0		"	"	64.1
39.338			0	39.8	1	"	"	75.
99.990			U	38.7	4	"	"	82·6 93·
37.174		37.16	2	00.	-	"	"	41019-1
36.974		THE REAL VE	0			"	"	22.4
THE BOTH				36.8	4	"	"	25.
DET SELECTED	1983			35.2	2	"	"	52.
		Man Maria	HAT ST	35.0	1	"	"	56.
33.346			0	33·6 33·4	ln ln	"	"	79· 82·7
32.755		32.75	1	32.7	1	"	"	93.6
02 100	287 B	32.03	i	02 1	AL A	"	"	41105.8
31.936		31.94	2	THE STATE OF	12 - 2	"	39	07.4
			I sale	31.8	3	"	,,	10.
		HE FULL	ni go	31.5	2	,,	,,	15.
	Alexander		FAST.	30.8	2	"	"	27.
20.010		20.00	-	29·8b	2	"	"	44.
29.610		29.60	2	29.5	2	99	39	46.9
29.268			0	29.0	Z	33	"	49· 52·6
29 053			2	29.1	2	"	"	56.2
27.777		27.77	2	201	-	"	12.2	77.8
27.193		27.20	3	27.2	2	,,	"	87.5
25000000			- Illu	27·1b	4	"	"	89.
				26.5	2	"	,,,	99.
01 701		04 57	1	25.4	1	99	"	41218
24.521	USE TE	24.51	0	24.5	2 2	99	"	33.2
24.021		24.02	2	24.1	2	33	"	40·2 41·9
24 021		2402	2	23.8	1	"	"	45.
THE REAL PROPERTY.				23.5	2	"	99	50.
De la			-	23.2	2	39	"	56.
The same of			1088	22.6	1	"	"	66.
22.237			0	22.2	2	"	"	71.9
91.000		91.05	0	21.9	1	0.71	"	78.
21.060 20.947		21.05	0	21·0b 20·1	6 2	"	"	92·1 93·9
20.947		20.26	2	20.1	4	"	"	41305.6
20 271		19.79	2			"	"	13.7
18.718		18.71	3			"	"	32.1
17.523		1000	0	17.5	4	"	,,	52.5
	N. Tables	TEN SE	100	16.8	2	"	,,	65.
DESCRIPTION OF THE PERSON OF T	0.00	15.93	2	1		"	99	79.7
14.007	AND BEAR	ALL US	0	15.8b	6	-99	"	82.
14·927 14·662	100000		3 0	14.6	1	"	"	96·9 41401·5
14.433			0	14.0	1	"	"	05.4
12 100	100	H. B. E.		13.8	1	"	,,,	16.
12.613		12.61	1	1000	1	"	12.3	36.6
The case of	The state of	The state of the s		11.9	1	"	"	49.
	1000	E 18.5	FUE	10.6	4	"	,,,	71.
10.348	The same	10.35	10	distant.	1	"	>>	75.5

RHODIUM—continued.

		KI	HODIUM	-continue	u.		/NO. 10					
	Arc Spec	trum		Spark Spe	etrum		tion to					
	Wave-length Rowland				sity			Wave- length sity and		Vac		Oscillation Frequency in Vacuo
Kayser	and Tatnall	and Haschek	Cha- racter	Exner and Haschek	Cha- racter	λ+	$\frac{1}{\lambda}$					
2409-626		2409-62	0			0.71	12.3	41488.0				
08.745	Land State		0		S. Land	,,	99	41503.1				
			195	2408.6	2	,,	"	06.				
08.275		08.26	1			"	"	11.3				
08·100 07·974		08·06 07·97	0 2	AL ALTER	View I	"	"	14·6 16·4				
07.974		01.91	-	07.8	1	"	"	19.				
				06.9	î	"	"	35.				
06.472		Estan Til	0			"	"	42.3				
Alle de		MARKET STA		05.3	4	"	"	63.				
				04.0	1	,,	"	85.				
		M. 19 - 40		03.3	2	"	,,	97-				
	THE STATE OF THE S			00.6	2	,,,	"	41644.				
		2000 08		2399.3	1	,,	99	67.				
2399.044		2399.05	0	00.0		99	"	70·9 73·				
96.617		96.61	0	98·9 96·6b	1 8	"	12.4	41713.1				
30.017		30 01	U	95.7	1	22		29.				
				92·4b	8	"	"	87.				
TO CONTRACT THE				90.7	4	"	,,	41816				
			1 93	89.9	1	22	,,	30.				
TALL SO				89.2	1	,,	,,	43.				
			THE P	87.9	2	39	,,	65.				
86.489		00.00	0	000	0	99	"	90.1				
86.222		86.23	4	86.2	2 4	"	î,	94·8 41908·				
84.751		84.76	2	85.5	4	"	"	20.6				
04 701		07 10	-	83.6	4 .	"	"	41.				
83.490		83.50	2		500	"	**	42.8				
82.969		83.00	2	82.8.	2	,,	12.5	51.7				
			10 100	82.1	2	,,	,,	67.				
				81.0	1	"	"	87.				
		#0.00	1	79.5	ln	"	"	42013				
		79.02	1	70.0	4	"	"	21.6				
Tribally 1			Tel Su	78·0 76·8	1	***	"	61.				
			STATE OF	76.4	i	"	"	68.				
and a			P10-	75.0	2	"	"	93.				
SERVE STATE			1 300	73.7	ln	0.70	"	42116				
MARKET STATE				72.9	1	33	"	30.				
			(Sec. 1)	71.7	1	,,	"	51.				
WC 242		HO 0F		71.1	In	"	"	62.				
70.642		70.67	.2	70.2	1	"	"	69.9				
69.654		69.66	2	70·3 69·7	2n	"	"	87:7				
05.094	DATE NO.	68.94	ln	00 1	211	"	"	42200.5				
68.380		68.38	3	10 15 16		"	12.6	10.4				
00 000		66.97	1	67.0"b	4	"	"	35.5				
				66.4	ln	"	,,	46.				
			E R	65.3	ln	99	,,	65.				
		64.74	1	64.8	2	"	,,	75.3				
Constitution of the last	W. 5 1 1 2 2 3			64.3	2	,,	,,	83.				
		62.01	1	63·2 62·2	1	"	33	42303 • 24 • 2				
	17 3 7 7 7	02.01	1	02.2		33	99	41 4				

	Arc Spect	rum		Spark Spe	ectrum	Reduc		
Entroit.	Vave-length	Sendant	Inten- sity	Wave- length	Inten- sity	Vacı	um	Oscillation
Kayser	Rowland and Tatnal	Exner and Haschek	and Cha- racter	Exner and Haschek	and Cha- racter	λ+	$\frac{1}{\lambda}$	in Vacuo
Special P	VEF BOO	2361.25	0.6122 3-11	2361.6	1	0.70	12.6	42332· 37·8
536	0	2301-23	STATE OF	60.9	1	99	"	44.
77	7 1		- 73	60.5	î	"	. 29	51.
			100000	59.7	2	,,	"	66.
0.5		59.26	1	59.3	2	"	,,	73.6
		58.55	1			,,	,,	86.3
(0)				58.0	1	,,	,,	. 96.
	40 1 1 1 1		- 10	57.6	1	"	,,	42403
			1.84	56·3 55·8	1	"	"	27.
The state of the s	The Party of		The same	55.2	i	"	"	36· 47·
CO.	District Control		310/12	54.2	i	"	12.7	65.
1	San		-	53.7	i	99	"	74.
				53.0	În	"	"	86.
		52.55	1	52.5	1	,,	,,	94.4
				51.7	1	,,	39	42510
				51.3	1	,,	,,,	17.
			100	50.4	1	,,,	,,	33.
The sale				49.7	1	, ,,	>>	46.
			3	48·0 47·2	2	"	"	77· 91·
			1 3 8	46.8	2	"	,,	99.
				46.5b	4	"	"	42604
2345.597			1	2000		"	,,	20.4
				45.0	2	,,	",	31.
			2762	44.4	ln	,,	,,	42.
				43.6	1	"	,,	57.
			Della T	43.3	1	**	"	62.
				42.5	2	,,	,,	77.
				40.1	1	,,	12.8	89· 42720·
	BELL .		12 12 1	38.6	1	,,		48.
				36.9	2	"	"	79.
			1185	35.9	1	,,	"	97.
	Date of	1	10.69	35.2	2	,,	,,	42810
04.700	Barrier C	34.85	2	34·8b	6	"	,,	16.5
34.762	3 1	90.0	1	20.4	1	"	,,	18.1
		33.37	1	33·4 29·5	4	"	99	43.7
28.737		28.74	2	29.0	ln	"	"	28.9
20 101		40 /4	2	28.5	2	"	"	33.
	and the same			27·8b	4	"	"	46.
		26.56	101	26.5	1	,,,	12.9	69.0
104			1750	25.5	1	0.69	,,	89.
		22.22	THE PARTY	23.0	1	"	,,	43035
	30 TO 80	22.68	1	22.6	1	"	>>	40.8
	11111111111	21·82 19·95	1	21.9	1	"	"	56·8 91·5
19.173	Bott Spilled	19.95	2	THE STATE OF	1100	"	"	43105.9
18.432		18.44	2	TENEST.	18/18	"	"	19.6
10 101		10 11	- 33	17.4	1	"	**	39.
		0= -3 -1		16.6	1	"	99	54.
		1	1	14.2	1	A STATE OF THE PARTY OF THE PAR	13.0	98.

154

	177	NH.	ODIUM.	-continued	•	3000	2003	11-1-18
	Arc Spect	rum	te alsonie	Spark Spe	ectrum	Reduct		
animalitioning	Wave-length	-segul	Inten- sity	Wave- length	Inten- sity	v act	and the	Oscillation Frequency
Kayser	Rowland and Tatnall	Exner and Haschek	and Cha- racter	Exner and Haschek	and Cha- racter	λ+	$\frac{1}{\lambda}$	in Vacuo
	Laulian	Haschek		Haschek			32	
	mal app	1 1	2-5200	2313.9	1	0.69	13.0	43204
BEAT TO	112 110		1000	13.5	2-1082	,,	"	12.
122			0-00	12.6 11.6	2	,,	,,	28· 47·
		2311.14	1		1		"	55.7
1 81		09.89	i	9-	246	"	"	79.1
La Kar				09.0	1	"	,,	96.
2308.88			2			**	"	98.0
1200	and the me	1	The last	08.2	1 2	,,	"	43311.
	4	4	11-12-1	05·9 05·0	1	"	"	71.
1		1	4.012	01.9	i	"	"	43429
- 100			2.07	00.5	ln	"	13.1	56.
175			1000	2298.8	1	,,	,,	88.
		2004 54	Total I	98.3	4	"	"	97· 43568·6
N. S. A. S.		2294.54	1	94·6 94·2	2 4	"	>1	75.
		93.35	1	34.2	*	"	**	91.2
98		00 00	1 112	90.2	8	"	,,	43651
-Alti		90.10	1		3.4	"	,,	53.1
- AMOUNT	4	N WINTER		89.7	1	• • • • • • • • • • • • • • • • • • • •	,,	61.
100		88.97	- 1			"	,,,	74·7 81·5
200		88.61	1	88.3	1	"	13.2	87.
N.G.I				86.2	1	,,	"	43728
- 18 VO 11		W Breys		85.1	i	,,	,,	49.
Zaraka	3			84.2	4	,,	,,	66.
TYTE STATE OF			Ser Eller	83.6	1	,,	"	77· 85·
	CONTRACTOR OF AN A			83·2 83·0	1	,,	",	89.
		F - 1		81.4	1	,,	"	43820
41000	Shet a		1000	81.2	î	,,	,,	23.
1366				80.9	1	,,,	,,	29.
MARKET		1 3 m	100	80.1	1	•,	,,	45.
1 1 2 2 2 2 2 2 2		1	0.00	78.1	1	,,	,,	83· 85·
27923			2	78·0 77·3	1	0.68	"	98.
1953	1 1 1 1 1 1	77.00	1	77.0	2	,,	,,	43904.2
13-13-15		12 35 3		76.3	2	,,	,,	18.
	100	10,000	1000	74.2	1	,,	13.3	58.
		VENDER	13.045	73.7	1	",	,,	44010
		D. T. O.	10.11	71·5 70·5	1	"	"	30.
(A) (2)		1 1 1 1	51902	68.9	2	**	,,	61.
Page 1	1	141 155	100	68.0	1	,,	,,	78.
THE SHE			LE SES	65.7	ln	,,	,,	44123
1000		No. Bull	La Tara	63.5	4	- "	13.4	99.
7-10	**		1	61.8	2	"	1	44262
I WOLEY	to State At	S S S S S AL	1 R S	58.4	1	"	"	66.
		548,348 L	1 505	57.3	i	"	"	87.
		1 1 1	100	55.7	1	,,	,,	44319
THE PARTY	14		1	55.5	2	, ,,	10.5	23.
100	House and	The Allerton	100 112	50.9	2	,,	13.5	44413

155 S

RHODIUM—continued.

		Reduc	ctrum	Spark Spe		Arc Spectrum			
Oscillation Frequency	uum	Vact			Inten-	Wave-length			
in Vacu	$\frac{1}{\lambda}$	λ+	and Cha- racter	Exper and Haschek	and Cha- racter	Exner and Haschek	Rowland and Tatnall	Kayser	
44429	13.5	0.68	1	2250-1			4.2.7		
37.			î	49.7					
57.	"	"	ln	48.7					
74.	"	"	ln	47.8					
90.	"	"	1	47.0					
44609	"	"	1	41.0					
	"	"	1	40.8					
13.	**	37	1	40.2					
	"	99	2	39.2					
45.	10.0	99		38.4					
61.	13.6	"	1	37.7					
75.	99	, ,,	2						
85.	99	"	1	37.2					
95.	,,,	- "	1	36.7					
99.	"	,,	1	36.5					
44709	,,,	,,	1	36.0					
23.	99	,,	1	35.3					
44815	37	**	2	30.7			TO THE THE		
46.	,,	0.67	ln	29.2					
64.	,,	,,,	1	28.3					
. 96.	13.7	,,	2	26.7					
44910	,,	,,	1	26.0					
28.	,,	**	2	25.1					
91.	",	,,	1	22.0					
45013	,,	**	1	20.9					
23.	,,	,,	1	20.4	S Oran				
44.			1	19.4					
45307	13.8	"	i	06.5					
45461	13.9	"	i	2199.0					
45519		"	i	96.2					
61.	"	,,	1	94.2			4-5-1	The last	
90.	"	"	i	92.8				HI TO BE A	
45627	14.0	"	1	91.0			La mana		
		"							
45732	"	,,	1	86.0			The branch		
45816.	77.0	0.00	1	82.0					
46126	14.2	0.66	2	67.3		0.00			

Note.—Lines marked a are resolved into four constituents in a very strong magnetic field, those marked b into triplets, those marked c into doublets (Purvis, $Proc. Cambridge\ Phil.\ Soc.$, xiii. p. 322).



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BRODIES - COMPANIES

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